Cover Message

MHI, as experts in manufacturing products, provide various technologies and products that support the social infrastructure. We consider each of them to be essential in making people’s lives fulfilling.

We also believe that succession of technology and fostering the next generation who will create the future world are important social contributions, and thus we have opened the Mitsubishi Minatomirai Industrial Museum to cultivate children’s interest in manufacturing.

The photographs are of children attending a handicraft class where pupils are thinking seriously on their own and enjoying manufacturing handiwork.

Looking at these photographs, we strongly feel that some of these children will become excellent engineers and scientists creating an affluent future.

MHI will make continuous efforts to provide technologies and products for creating a sustainable society, and to foster the next generation as well as to engage in environment conservation activities to hand over a verdant earth to the next generation with pride and responsibility.
Corporate Philosophy

Based on the concept of "The Three Corporate Principles," which has been shared by the Mitsubishi group from the company's beginnings and on the creed instilled in 1970, our company has adopted the management ethos that, through our corporate business activities, we will contribute to the progress of society. Committing to fair corporate business activities in compliance with the relevant laws and regulations, we will continue to provide products and services that improve the quality of life and work and support the foundation of society, earning the trust of our customers and contributing to the development of society, and perform high-quality activities in fields related to environmental conservation and community relations.

Reason for Instituting the Creed

In Japan there are many enterprises with their own "creeds" which simply represent their management concept. Mitsubishi Heavy Industries, Ltd. has a creed of this type, also. This creed was instituted in 1970 on the basis of the policy advocated by Koyata Iwasaki, president of Mitsubishi Goshi Kaisha in the 1920s, to indicate the essential attitude of the company, the mental attitude of the employees, and the future directions of the company. The reason for instituting the present creed is that all of us can call to mind our one hundred years of tradition, and strive for further development in the future.

Issued June 1, 1970

Company Profile

Trade Name: Mitsubishi Heavy Industries, Ltd.

Founded: July 7, 1884
Established: January 11, 1950
President: Kazuo Tsukaeda, President
Head Office: 1, Aza Takamichi, Iwatsuka-cho, Nakamura-ku, Nagoya  Postal Code: 453-8515
Phone: 81-52-412-1110 (General Affairs Dept.)
Fax: 81-52-503-3533

Employees: 34,396 (as of March 31, 2004)
Capital: 305.0 billion yen (as of March 31, 2004)

Locations

General Machinery & Special Vehicle Headquarters

Machinery Works

Nagasaki Shipyard & Machinery Works
1, Momichi-machi, Nagasaki, Postal Code: 856-0810
Phone: 81-95-626-6111
Fax: 81-95-626-3111

Kobe Shipyard & Machinery Works

Kobe, Postal Code: 652-8585
Phone: 81-6-202-7500
Fax: 81-6-202-7501

Shimonoseki Shipyard & Machinery Works

Shimonoseki, Postal Code: 756-8605
Phone: 81-853-67-7111
Fax: 81-853-67-7113

Yokohama Dockyard & Machinery Works

Yokohama, Postal Code: 224-0115
Phone: 81-45-764-8500
Fax: 81-45-764-9501

Nagoya Shipyard & Machinery Works

Nagoya, Postal Code: 460-9293
Phone: 81-6-280-1001
Fax: 81-6-280-1002

Nagoya Guidance & Propulsion Systems Works

Nagoya, Postal Code: 460-0650
Phone: 81-6-284-3750
Fax: 81-6-284-3650

Air-Conditioning & Refrigeration Systems Engineering & Construction Center

Kobuchis, Postal Code: 254-0813
Phone: 81-42-761-1101
Fax: 81-42-761-1111

Plant and Transportation Systems Engineering & Construction Center

Kasugai, Postal Code: 452-8561
Phone: 81-52-461-7100
Fax: 81-52-461-7101

Nagoya Machinery Works

Nagoya, Postal Code: 460-0050
Phone: 81-6-281-1111
Fax: 81-6-281-1112

Nagoya Guidance & Propulsion Systems Works

Nagoya, Postal Code: 460-0650
Phone: 81-6-284-3750
Fax: 81-6-284-3650

Plant and Transportation Systems Engineering & Construction Center

Kobuchis, Postal Code: 254-0813
Phone: 81-42-761-1101
Fax: 81-42-761-1111

Nagoya Machinery Works

Nagoya, Postal Code: 460-0050
Phone: 81-6-281-1111
Fax: 81-6-281-1112

Environmental Accounting

Environmental Management

Environmental Risk Management

Control of Chemical Substances

Global Warming

Countermeasures Against Global Warming

Resources Conservation and Waste Management

Control of Chemical Substances

Environmental Risk Management

Green Purchasing

Commitment to Our Shareholders

Message from the President

Editorial Policy

This report reflects Mitsubishi Heavy Industries, Ltd.'s business approach and activities related to the development of a sustainable society. Mitsubishi Heavy Industries, Ltd. (MHI) hopes that this report will serve as a foundation for positive dialogue with the society of stakeholders regarding business practices. Specifically, a special feature, "The Role of Mitsubishi Heavy Industries, Ltd.", clearly defines MHI's concept regarding the four pillars of the company (power & energy, transportation & security, environment & society, and industrial to build a sustainable society. The feature also contains detailed comments from representative stakeholders.

In addition, a special report, "MHI's Commitment to Environmental Issues", describes nuclear power generation, CO2 capture and renewable energy considering how these technologies can aid the realization of a sustainable society.

In developing this report, we further enhance the quality of information reported in past environmental reports by providing specific figures. In addition, this report introduces a new chart called "sociality report." We received third-party comments on this report from key figures as a representative of stakeholders and present the comments herein.

Scope of reporting covered by this report

Organisation: This report covers information pertaining to Mitsubishi Heavy Industries, Ltd., however, the business outline contains some consolidated data (such as sales figures and the number of employees).

Period: April 2003 to March 2004 (information on other activities after March 2004 is included)

Date issued: June 2004 (date of previous report issued: June 2003)


Environmental Report

Environmental Management System

Mid- and Long-Term Objectives and Progress in 2003

Environmental Accounting

Overall Picture of the Effect on the Environment by Our Business Operations

Countermeasures Against Global Warming

Resources Conservation and Waste Management

Control of Chemical Substances

Environmental Risk Management

Green Purchasing

Introduction of Works Activities

Commitment to Our Customers

Commitment to Our Employees

Commitment to Local Communities

Commitment to Our Shareholders, Suppliers, and Institutions

Sociality Performance Overview

Progress Toward a Sustainable Society

Comments of Third Party

Comparative Table with GRI Guidelines 2002

Environmental Report

Financial Results

Commitment to Our Employees

Special Feature 2

MHI’s Commitment to Environmental Issues
Corporate Philosophy

Based on the concept of "The Three Corporate Principles," which has been shared by the Mitsubishi group from the company’s beginnings and on the creed instated in 1970, our company has always adhered to management ethics that, through our corporate business activities, we will contribute to the progress of society. Conforming to our corporate business activities in compliance with the relevant laws and regulations, we will continue to provide technologies and products that support the foundation of society, earning the trust of our customers and contributing to the development of society, and perform high-level activities in fields related to environmental conservation and community relations.

Corporate Philosophy

Reason for Instituting the Creed

In Japan there are many enterprises with their own "creeds" which simply represent their management concept. Mitsubishi Heavy Industries, Ltd. has a creed of this type, also. This creed was instituted in 1970 on the basis of the policy advocated by Koyata Iwasaki, president of Mitsubishi Goshi Kaisha in the 1920s, to indicate the essential attitude of the company, the mental attitude of the employees, and the future directions of the company.

The reason for instituting the present creed is that all of us can call to mind our one hundred years of tradition, and strive for further development in the future.

Issued: June 1, 1970

Company Profile

Trade Name: Mitsubishi Heavy Industries, Ltd.  
Founded: July 7, 1894  
Established: January 11, 1950  
President: Kazuo Tanna, President  
Head Office: 6-16-1, Kaminarimon-cho, Minato-ku, Tokyo  
Capital: 230.8 billion yen (as of March 31, 2004)  
Employees: 34,386 (full consolidated) (as of March 31, 2004)

Locations

Headquarters & Divisions
- General Machinery & Special Vehicle Headquarters
  360, Rokubou Minato, Koto-ku, Tokyo 101-8881  
  Phone: 81-3-5547-8100  
  Fax: 81-3-5547-8101
- Air-Conditioning & Refrigeration Systems Headquarters
  2-1-1, Shimbashi, Minato-ku, Tokyo 105-0005  
  Phone: 81-3-5777-4110  
  Fax: 81-3-5777-4129
- Paper & Printing Machinery Division
  6-16-1, Kaminarimon-cho, Minato-ku, Tokyo 101-8881  
  Phone: 81-3-5569-8100  
  Fax: 81-3-5569-8101
- Machine Tool Division
  103, Hikokou Minato, Shinagawa-ku, Tokyo 145-8501  
  Phone: 81-3-5202-6300  
  Fax: 81-3-5202-6301

Works

Nagasaki Shipyard & Machinery Works
  1-1, Misaki-cho, Nagasaki-ku, Nagasaki 852-0910  
  Phone: 81-95-828-4105  
  Fax: 81-95-828-4106

Kobe Shipyard & Machinery Works
  1-1, Shimonoseki-chuo, Shimonoseki 750-0005  
  Phone: 08-761-1101  
  Fax: 08-761-1102

Shimonoseki Shipyard & Machinery Works
  1-1-1, Shimonoseki-chuo, Shimonoseki 750-0005  
  Phone: 08-761-1101  
  Fax: 08-761-1102

Yokohama Dockyard & Machinery Works
  1-1, Minato-ku, Yokohama 220-0175  
  Phone: 81-4-40-20-1001  
  Fax: 81-4-40-20-1002

Mitsubishi Machinery Works
  4-20, Kamata-cho, Nakanoshima-ku, Tokyo 105-0003  
  Phone: 81-3-5202-6300  
  Fax: 81-3-5202-6301

Takamatsu Machinery Works
  3-1, Iyo-cho, Shikokuchuo, Takamatsu 760-0006  
  Phone: 81-87-46-4502  
  Fax: 81-87-46-4503

Nagoya Aeronautics & Propulsion Systems Works
  16-1, Shimotsuketaicho, Tenpaku-ku, Nagoya 464-0005  
  Phone: 81-52-21-1201  
  Fax: 81-52-21-1202

Nagoya Shipyard & Machinery Works
  6-16-1, Kaminarimon-cho, Minato-ku, Tokyo 101-8881  
  Phone: 81-3-5202-6300  
  Fax: 81-3-5202-6301

Nagasaki Aerospace Works
  16, Obi-cho, Minato-ku, Nagasaki 850-0005  
  Phone: 81-95-828-4105  
  Fax: 81-95-828-4106

Nagasaki Shipyard & Machinery Works
  130, Ota-higashi Gakuen-chou, Koto-ku, Tokyo 135-0001  
  Phone: 81-3-3647-7880  
  Fax: 81-3-3647-7881

Plant and Transportation Systems Engineering & Construction Center
  5007, Itozaki-cho, Mihara, Hiroshima 729-0393  
  Phone: 81-82-291-2112  
  Fax: 81-82-291-2113

Mitsubishi Minatomirai Industrial Museum
  1-1, Minatomirai, Naniwa-ku, Yokohama 220-0015  
  Phone: 81-4-525-8800  
  Fax: 81-4-525-8801

Editorial Policy

This report reflects Mitsubishi Heavy Industries, Ltd.'s business approach and activities related to the development of a sustainable society. Mitsubishi Heavy Industries, Ltd. (MHI) hopes that this report will serve as a foundation for positive dialogue with the variety of stakeholders regarding business practices. Specifically, a special feature, “The Role of Mitsubishi Heavy Industries, Ltd.,” clearly defines MHI's concept regarding the four pillars of the company (power & energy, transportation & security, environment & society, and industries) to build a sustainable society. The feature also contains detailed case studies from representative stakeholders.

In addition, a special report, “MHI's Commitment to Environmental Issues,” describes nuclear power generation, CO2-recovery technologies and renewable energies considering how these technologies can aid the realization of a sustainable society.

In developing this report, we further enhance the quality of information reported in past environmental reports by providing specific figures. In addition, the report introduces a new term called “sustainable report.”

We received third-party comments on this report from key figures as a representative of stakeholders, and present the comments herein.

Scope of reporting covered by this report

- Organization: This report covers information pertaining to Mitsubishi Heavy Industries, Ltd. However, the business outline contains some consolidated data, (such as sales figures and the number of employees).
- Period: April 2003 to March 2004 (information on various activities after March 2004 is included)
- Date issued: June 2004 (date of previous report issued: June 2003)

Comparative Table with GRI Guidelines 2002
We will fulfill our corporate social responsibility (CSR) for the well-being of the people of the world.

We Will Meet the Requirements of Society by Emphasizing the Importance of Technology and Manufacturing.

Mitsubishi Heavy Industries, Ltd. deals sincerely with the requirements of every customer. We consider even the latent wishes of our customers, and develop them into actual products in the most suitable form.

As experts in manufacturing products, we provide various technologies and products that form the foundations of society in fields such as “power & energy,” “transportation & security,” “environment and society” and “industries.” We consider each of them to be essential in making people’s lives fulfilling. For example, in the field of the environment, we promote the utilization of clean energy such as wind power; on the other hand, we are making efforts in the business of absorbing or eliminating substances harmful to the global environment in areas such as the detoxification of PCBs and the recovery of exhaust CO2 that may cause global warming.

In addition, handing down technology and raising the next generation are important contributions to society. As one of our activities in this field, we have opened the “Mitsubishi Minatomirai Industrial Museum” to communicate with local residents and heighten the interest of the young people in the sciences.

We Disclose Our Ideas and Activities, and We Dialogue with You.

From this year, we have issued a Social and Environmental Report (CSR Report) in which social and economic articles have been added to the previous “Environmental Report” that was mainly composed of articles on our environmental conservation activities.

We would appreciate your frank opinions and requests concerning our activities.

Message from the President

Kazuo Tsukuda
President

We Have Established a Vision and Mission to Clarify Our Social Role.

This is the 120th year since the foundation of Mitsubishi Heavy Industries, Ltd. Since foundation, we have carried out our activities in accordance with the management ethos of contributing to the progress of society through company business.

The significance of “contribution to the progress of the society,” however, changes with time. Today, its significance lies in contributing to the safe, affluent life of the people of the world and continuing to develop the company by building trust with customers and advancing the technology of the company, while maintaining harmony between the global environment and economic activities. Based on this idea, I have established a vision of our company and a mission to implement it, clearly showing the direction that Mitsubishi Heavy Industries, Ltd. should take to people both in and outside the company. (See the lower part of the next page.)

Our company will operate consistently in accordance with this vision and mission.

We Will Manage the Company with Full Commitment to our Corporate Social Responsibility (CSR).

It is a basic duty of an enterprise to satisfy its customers’ requirements, to enhance the motivation of its employees, and to pay a proper dividend to its shareholders. These duties, however, cannot be fulfilled if the enterprise loses the confidence of society. Mitsubishi Heavy Industries, Ltd. can only continue to exist if it is accepted by society as a reliable company. In this sense, we will promote various projects that will profit a wide range of people from a global viewpoint with full commitment to our corporate social responsibility (CSR).

We Will Ensure that CSR Is Established As an Enterprise Culture, and Aim To Be an Enterprise That Can Always Be Relied upon by Society.

To fulfill the social responsibilities of the enterprise, our company will always engage in the three following activities.

The first activity is concerned with “corporate governance,” “compliance” and others, in particular, “compliance” is essential for our company to win the trust of society and sustain healthy development, which is prerequisite for the survival of any enterprise.

The second activity is concerned with “the environment, human rights and labor.” We promote improvement in all company activities concerning such matters.

The third activity is contributing to realizing a safe, secure, fulfilling life for the people of the world through company business.

Through performing these three activities, we will ensure the establishment of CSR as an enterprise culture and aim to be an enterprise that can always be relied upon by society.

Vision & Mission

Based upon the “vision” and “mission,” Mitsubishi Heavy Industries, Ltd. (MHI) contributes to the well-being of the people of the world.

Vision: “MHI, a premier global organization.” We are an enterprise that continuously develops and contributes to the safe, fulfilling life of people worldwide, living up to the trust of customers with outstanding technology.

Mission: “To improve the four values of the enterprise, “value for shareholders,” “value for customers,” “value for employees” and “value for society.”

In this museum, you can freely experience and study various scientific matters. “Environment,” “Space,” “Ocean,” “Construction,” “Energy” and “Technologies All Around Us” are the six main themes. We hope that visiting children will enjoy the sciences through this museum, and create a future Japan with lofty ambitions.

We endeavor to improve the four values of the enterprise, “value for shareholders,” “value for customers,” “value for employees” and “value for society.”

Value for Shareholders
- Dividend, etc.

Value for Customers
- Compliance of Products (Quality, Delivery Time and Price), etc.

Value for Employees
- Safety and Health, etc.

Value for Society
- Contribution to the Development of Society, etc.

We will strive to implement this vision and mission through our activities in this field, we have opened the “Mitsubishi Minatomirai Industrial Museum” to communicate with local residents and heighten the interest of the young people in the sciences.
We will fulfill our corporate social responsibility (CSR) for the well-being of the people of the world.

We Will Meet the Requirements of Society by Emphasizing the Importance of Technology and Manufacturing.
Mitsubishi Heavy Industries, Ltd. deals sincerely with the requirements of every customer. We consider even the latest wishes of our customers, and develop them into actual products in the most suitable form. As experts in manufacturing products, we provide various technologies and products that form the foundations of society in fields such as “power & energy,” “transportation & security,” “environment and society,” and “Industries.” We consider each of them to be essential in making people’s lives fulfilling. For example, in the field of the environment, we promote the utilization of clean energy such as wind power; on the other hand, we are making efforts in the business of absorbing or eliminating substances harmful to the global environment in areas such as the detoxification of PCBs and the recovery of exhaust CO2 that may cause global warming.

In addition, handing down technology and raising the next generation are important contributions to society. As one of our activities in this field, we have opened the “Mitsubishi Minatomirai Industrial Museum” to communicate with local residents and heighten the interest of the young people in the sciences.

In this museum, you can freely experience and study various scientific matters. “Environment,” “Space,” “Ocean,” “Construction,” “Energy” and “Technologies All Around Us” are the six main themes. We hope that visiting children will enjoy the sciences through this museum, and create a future Japan with lofty ambitions.

We Disclose Our Ideas and Activities, and We Dialogue with You.
From this year, we have issued a Social and Environmental Report (CSR Report) in which social and economic articles have been added to the previous “Environmental Report” that was mainly composed of articles on our environmental conservation activities. We would appreciate your frank opinions and requests concerning our activities.

Vision & Mission
Based upon the “vision” and “mission,” Mitsubishi Heavy Industries, Ltd. (MHI) contributes to the well-being of the people of the world.

Vision
MHI, a premier global organization. We are an enterprise that continuously develops and contributes to the safe, fulfilling life of people worldwide, living up to the trust of customers with outstanding technology.

Mission
We endeavor to improve the four values of the enterprise, “value for shareholders,” “value for customers,” “value for employees” and “value for society.”
To identify our role in building a sustainable society and developing a company that contributes to society, it is essential to listen to the various opinions of specialists in non-profit organizations (NPOs) and non-governmental organizations (NGOs). MHI will continue to value its partnerships with such organizations.

Relationship with Stakeholders

"MHI, a premier global organization." This is our company vision. MHI seeks to achieve a "win-win" relationship that will benefit our wide variety of stakeholders around the world as we progress with business globalization, and will continue with our commitment to social responsibility as we work toward realizing a sustainable society.

MHI builds a relationship of trust with its shareholders by activating communication, such as information disclosure. Considering factors such as profit standards and the retained earnings necessary for future business development, the company pays dividends that meet shareholder expectations.

MHI strives to improve its human resources system to help employees realize individual potential and energize the organization. MHI also considers employee working conditions, human rights, and safety.

MHI considers its customers to be not only the immediate delivery destinations of our products and services but also those that benefit from our products and services. MHI will continue to enhance communication with society.

MHI contributes to the government through participation in national projects and product delivery. In addition, our company promotes business activities that comply with the laws and regulations of overseas countries and other social standards.

MHI contributes to various local communities where we conduct our business activities and where our products are delivered, and will continue to make every effort to maintain sufficient communication to solidify the relationship of trust with each community.

MHI considers its customers to be not only the immediate delivery destinations of our products and services but also those that benefit from our products and services. MHI will continue to enhance communication with society.
To identify our role in building a sustainable society and developing a company that contributes to society, it is essential to listen to the various opinions of specialists in non-profit organizations (NPOs) and non-governmental organizations (NGOs). MHI will continue to value its partnerships with such organizations.

Relationship with Stakeholders

"MHI, a premier global organization." This is our company vision. MHI seeks to achieve a "win-win" relationship that will benefit our wide variety of stakeholders around the world as we progress with business globalization, and will continue with our commitment to social responsibility as we work toward realizing a sustainable society.

MHI builds a relationship of trust with its shareholders by activating communication, such as information disclosure. Considering factors such as profit standards and the retained earnings necessary for future business development, the company pays dividends that meet shareholder expectations.

MHI has formed relationships with various local communities around the world where we conduct our business activities and where our products are delivered, and will continue to make every effort to maintain sufficient communication to solidify the relationship of trust with each community.

MHI considers its customers to be not only the immediate delivery destinations of our products and services but also those that benefit from our products and services. MHI will continue to enhance communication with society.

MHI contributes to the government through participation in national projects and product delivery. In addition, our company promotes business activities that comply with the laws and regulations of overseas countries and other social standards.

MHI contributes to the government through participation in national projects and product delivery. In addition, our company promotes business activities that comply with the laws and regulations of overseas countries and other social standards.
The Role of Mitsubishi Heavy Industries, Ltd.

The corporate philosophy of Mitsubishi Heavy Industries, Ltd. has not changed since the founding of the company 120 years ago. Our company is determined to contribute to society by manufacturing and providing products.

The Mitsubishi group, from the company's beginnings, has shared the basic concept of "The Three Corporate Principles." The spirit of these principles continues to live in our company creed.

The first condition of our creed is that "We strongly believe that the customer comes first and that we are obligated to be an innovative partner to society." This is Mitsubishi Heavy Industries, Ltd.'s CSR.

By manufacturing and providing products, our company contributed to the industrialization and cultural enlightenment of Japan 120 years ago. Our mission now is to work toward realizing safe, fulfilling lives for all people around the world. Above all, our company will make every effort to reduce the global environmental burden through our technologies and products. This is to be our contribution to the world.

To ensure that human beings and society continue for many years to come, to ensure that we leave this beautiful earth to the children of the future... By manufacturing and providing products, we will improve communication with people around the world, and continue to propose and provide products and ideas that aid in building a prosperous society. This is our role.

© MHI Social and Environmental Report 2004
The corporate philosophy of Mitsubishi Heavy Industries, Ltd. has not changed since the founding of the company 120 years ago. Our company is determined to contribute to society by manufacturing and providing products.

The Mitsubishi group, from the company's beginnings, has shared the basic concept of "The Three Corporate Principles." The spirit of these principles continues to live in our company creed.

The first condition of our creed is that "We strongly believe that the customer comes first and that we are obligated to be an innovative partner to society." This is Mitsubishi Heavy Industries, Ltd.'s CSR.

By manufacturing and providing products, our company contributed to the industrialization and cultural enlightenment of Japan 120 years ago. Our mission now is to work toward realizing safe, fulfilling lives for all people around the world. Above all, our company will make every effort to reduce the global environmental burden through our technologies and products. This is to be our contribution to the world.

To ensure that human beings and society continue for many years to come, to ensure that we leave this beautiful earth to the children of the future... By manufacturing and providing products, we will improve communication with people around the world, and continue to propose and provide products and ideas that aid in building a prosperous society. This is our role.

*Corporate Social Responsibility
The Role of Mitsubishi Heavy Industries, Ltd.: Toward the Realization of a Sustainable Society

Power & Energy

Supply all areas of the world with highly efficient, clean energy

MHI’s Approach

In response to the demand for sustainable energy supply, Mitsubishi Heavy Industries, Ltd., supplies clean energy with high efficiency to all over the world.

MHI employs alternative energy-related technologies such as the integrated coal gasification combined cycle power plant and the pressurized fluidized bed combustion boiler, as well as a variety of clean, natural energies such as wind power, geothermal power and solar cells, and is involved in the development of new energies such as fuel cells.

MHI has already made many accomplishments in the field of nuclear power, which is a type of energy that does not emit CO₂ during the power generation process. The company prioritizes safety in the utilization of nuclear power, and in handling and managing radioactive waste based on a reliable system, while making every effort to further nuclear power safety research and development.

MHI also has received high acclaim from and earns the trust of the international community for its energy-saving developments, such as the high-efficiency gas turbines, steam turbines, ultra-supercritical boilers, and combined cycle power plants that realize the world’s highest thermal efficiency, thereby greatly contributing to a reduction in CO₂ emissions and the effective use of fossil fuels. In addition, the company has also developed the environment-friendly gas engines that exhibit the world’s highest power generating efficiency with low NOx, contributing to environmental conservation.

MHI will continue to pursue even higher efficiency and attain the optimal mix of various energies.

Our Power & Energy Business

Mission

Supply all areas of the world with highly efficient, clean energy

Composition of orders received (FY 2007)

<table>
<thead>
<tr>
<th>Power &amp; Energy</th>
<th>Orders (100 million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Systems</td>
<td>6,900</td>
</tr>
<tr>
<td>Manufactured Machinery</td>
<td>8,900</td>
</tr>
</tbody>
</table>

Free of CO₂ emissions, nuclear power provides clean energy suitable for global warming countermeasures.

The IGCC is a next-generation thermal power-generation system. Compared with conventional ultra-supercritical pulverized coal thermal power, the system exhibits outstanding efficiency and CO₂ reduction.

Highly efficient and economical, yet with minimal NOx, noise and vibration, the diesel engine is the heart of the power plant.

Power & Energy

Medium-Term Business Plan (2004-2007)

Comment from a Stakeholder

Chiiko Inoue
Managing Director

As head of a non-profit organization that supports women’s participation in the working world, Chiiko Inoue visits nuclear power plants and related equipment-manufacturing sites, conducting activities related to power and energy.

The Women’s Ability Reactive Program (WARP) is involved in promoting women’s participation in the working world. In recent years, we have held women’s study groups on energy issues closely related to everyday living as well as educational activities for children.

Having experienced the Great Hanshin Earthquake, I realize the importance of power and energy as a lifeline. As a consumer, I visited a plant site that produces nuclear power and spoke with many people in the area.

In the same way that consumers find out about producers, I would like the producer, Mitsubishi Heavy Industries, Ltd., to be aware of its consumers. Easy-to-understand explanations, considering that the end user is an average citizen, are greatly appreciated.

To ensure that we pass on to the next generation a society in which we can live with peace of mind requires a higher degree of energy self-sufficiency in Japan. We count on Mitsubishi Heavy Industries, Ltd. to increasingly contribute to building a safer, more secure society through its technological developments.

Products that Support the Optimal Mix of Energies

Nuclear Power Plant

Nuclear power-plant equipment, which is the backbone of global energy, contributes to energy self-sufficiency.

Wind Power-Generation Equipment

Wind power-generation equipment, which is clean and does not emit CO₂, contributes to renewable energy.

Solar Cells

Solar cells, which are clean and do not emit CO₂, contribute to renewable energy.

Medium-sized Coal-fueled Combined Cycle (IGCC)

The IGCC is a next-generation power-generating system that combines a gasification reactor with a steam turbine to achieve high efficiency and CO₂ reduction.
**Power & Energy**

Supply all areas of the world with highly efficient, clean energy

**Mission**

**Our Power & Energy Business**

- Thermal power generation equipment
- Nuclear power generation equipment
- Wind power generation equipment
- Solar cells
- Engines

**Products that Support the Optimal Mix of Energies**

- **Nuclear Power Plant**
  - Meets the demand for sustainable energy supply, Mitsubishi Heavy Industries, Ltd., supplies clean energy with high efficiency to all over the world.
  - MHI employs alternative energy-related technologies such as the integrated coal gasification combined cycle power plant and the pressurized fluidized bed combination boiler, as well as a variety of clean, natural energies such as wind power, geothermal power and solar cells, and is involved in the development of new energies such as fuel cells.
  - MHI has already made many accomplishments in the field of nuclear power, which is a type of energy that does not emit CO2 during the power generation process. The company prioritizes safety in the utilization of nuclear power and, in handling and managing radioactive waste based on a reliable system, while making every effort to further nuclear power safety research and development.
  - MHI also has received high acclaim from and earns the trust of the international community for its energy-saving developments, such as the high-efficiency gas turbines, steam turbines, ultra-supercritical boilers, and combined cycle power plants that realize the world's highest thermal efficiency, thereby greatly contributing to a reduction in CO2 emissions and the effective use of fossil fuels. In addition, the company has also developed the environment-friendly gas engines that exhibit the world's highest power generating efficiency with low NOx, contributing to environmental conservation.
  - MHI will continue to pursue even higher efficiency and attain the optimal mix of various energies.

- **Nuclear Power Plant Integrated Coal Gasification Combined Cycle (IGCC) Diesel Engine Co-generation System**
  - The co-generation system produces electricity by engines and recovers exhaust heat and steam which can be utilized for air conditioning also.

- **Medium-Term Business Plan (2004-2007)**
  - The Women’s Ability Reactive Program (WARP) is involved in promoting women’s participation in the working world. Chiiko Inoue visits nuclear power plants and related equipment-manufacturing sites, conducting activities related to power and energy.
  - Having experienced the Great Hanshin Earthquake, I realize the importance of power and energy as a lifeline. As a consumer, I visited a plant site that produces nuclear power and spoke with many people in the area.
  - In the same way that consumers find out about producers, I would like the producer, Mitsubishi Heavy Industries, Ltd., to be aware of its consumers. Easy-to-understand explanations, considering that the end user is an average citizen, are greatly appreciated.
  - To ensure that we pass on to the next generation a society in which we can live with peace of mind requires a higher degree of energy self-sufficiency in Japan. We count on Mitsubishi Heavy Industries, Ltd. to increasingly contribute to building a safer, more secure society through its technological developments.
Transportation & Security

MHI’s Approach

From ships to aircraft, transportation systems, and launch vehicles, Mitsubishi Heavy Industries provides various transportation equipment, supporting safe, comfortable travel and contributing to the distribution of goods around the world.

In the shipbuilding and ocean development sector, MHI delivers container ships and LNG carriers around the world that support a wide variety of transportation, and constructs large, luxurious passenger ships and high-speed ferries. The company also continually considers the environment, developing products such as marine engines with low NOx emissions. MHI received environmental protection notation (EP notation) from the Lloyd’s Register of Shipping for its LNG carriers, which was the first application to an LNG carrier in the world.

In the aerospace sector, MHI has made numerous accomplishments as a pioneer in Japan. MHI is currently proceeding with research and development for the wing box of Boeing’s next-generation aircraft, the 7E7, and is thereby establishing a firm position in the global aviation industry. MHI is also carrying out preliminary research into the development of a small-sized commercial jet that will achieve reduced environmental impact as well as improved comfort and convenience. In addition, MHI is involved in the privatization of the domestically produced H-IIA launch vehicle as a prime contractor.

In the transport equipment sector, MHI will continue to be actively involved in the development of new transportation systems, such as new energy-saving transportation systems free of waste gas, as a comfortable means of daily travel.

In the defense sector, to protect people’s lives and property, MHI makes every effort, utilizing cutting-edge technologies, to maintain and develop the defense production and technological bases of Japan by solution proposals, research and development, manufacturing and operation support of equipment.

To receive this notation, the product must clear various conditions such as emission regulations related to NOx and SOx, the prohibited use of CFC, and rules related to the prevention of oil contamination.

Comment from a Stakeholder

Tsukasa Nishikawa

Responsible for environmental technologies, including energy saving technology for merchant ships, the prevention of air pollution from ships, and protection against oil spills through the use of double-hull structures.

MHI, a reliable partner of Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain the highest levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of “a modal shift” to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environmentally friendly. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop even more effective business solutions.

* To enhance distribution efficiency and reduce environmental loads, trucks that have a lower environmental impact will be replaced with low-energy efficient forms of transportation such as railcars or ships which have a smaller environmental impact.

Products that Circle the Globe and the Skies

LNG Carrier

MHI has numerous environmental protection solutions that are utilized for the Lloyd’s Register of Shipping EP environmental protection notation and is thus an LNG carrier in the world.

Forklift

The CNG forklift employs compressed natural gas (CNG), which emits clean exhaust and is superior in economic efficiency and safety.

Medium-Term Business Plan (2004-2007)

Composition of orders received (FY 2007):

<table>
<thead>
<tr>
<th>Orders</th>
<th>10,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>10,500</td>
</tr>
<tr>
<td>2002</td>
<td>9,300</td>
</tr>
</tbody>
</table>

Comment from a Stakeholder

Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain the highest levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of “a modal shift” to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environmentally friendly. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop even more effective business solutions.

* To enhance distribution efficiency and reduce environmental loads, trucks that have a lower environmental impact will be replaced with low-energy efficient forms of transportation such as railcars or ships which have a smaller environmental impact.
Transportation & Security

**A company with expertise in all modes of transportation, from land, sea, and air to space, and in the defense sector**

**Special Feature 1: The Role of Mitsubishi Heavy Industries, Ltd. : Toward the Realization of a Sustainable Society**

In the shipbuilding and ocean development sector, MHI delivers container ships and LNG carriers around the world that support a wide variety of transportation, and constructs large, luxury passenger ships and high-speed ferries. The company also continually considers the environment, developing products such as marine engines with low NOx emissions. MHI received environmental protection notation (EP notation) from the Lloyd’s Register of Shipping for its LNG carriers, which was the first application to an LNG carrier in the world.

In the aerospace sector, MHI has made numerous accomplishments as a pioneer in Japan. MHI is currently processing with research and development for the wing box of Boeing’s next-generation aircraft, the 7E7, and is thereby establishing a firm position in the global aviation industry. MHI is also carrying out a preliminary research into the development of a small-sized commercial jet that will achieve reduced environmental impact as well as improved comfort and convenience. In addition, MHI is involved in the privatization of the domestically produced H-2A launch vehicle as a prime contractor.

In the transportation equipment sector, MHI will continue to be actively involved in the development of new transportation systems, such as new energy-saving transportation systems free of waste gas, as a comfortable means of daily travel.

In the defense sector, to protect people’s lives and property, MHI makes every effort, utilizing cutting-edge technologies, to maintain and develop the defense production and technological bases of Japan. MHI is also involved in the privatization of the domestically produced H-2A launch vehicle as a prime contractor.

From ships to aircraft, transportation systems, and launch vehicles, Mitsubishi Heavy Industries provides various transportation equipment, supporting safe, comfortable travel and contributing to the distribution of goods around the world.

MHI’s Approach

MHI will utilize its comprehensive and extensive technical capabilities to develop ever more effective business solutions.

**Products that Circle the Globe and the Skies**

- **LNG Carrier**
  - Best proves environmental protection
  - Notation received from the Lloyd’s Register of Shipping for its LNG carrier, which can be applied to LNG carriers in the world

- **H-2A Launch Vehicle**
  - The primary launch vehicle of Japan for overseas and domestic space transport

- **New Transportation System**
  - The role is taken to maintain the transportation system in accordance with our partnership in the transportation system and the transportation system in the world.

- **F-2 Support Fighter**
  - The F-2 is a joint venture of Japan and the United States for the air defense of Japan

- **CNG Forklift Truck**
  - The CNG forklift employs compressed natural gas and is superior in economic efficiency and safety.

MHI, a reliable partner of Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain high levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of "a model SHITU"** to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environment-friendly than ever. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop ever more effective business solutions.

**Comment from a Stakeholder**

** masahiko tomohiko**

**Tsunasa Nishikawa**

Responsible for environmental technologies, including energy-saving technology for merchant ships, the prevention of air pollution from ships, and protection against oil spills through the use of double-hull structures.

MHI's Approach

MHI, a reliable partner of Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain high levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of “a model SHITU” to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environment-friendly than ever. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop ever more effective business solutions.

**Comment from a Stakeholder**

**Masahiko Tomohiko**

Tsunasa Nishikawa

Responsible for environmental technologies, including energy-saving technology for merchant ships, the prevention of air pollution from ships, and protection against oil spills through the use of double-hull structures.

MHI, a reliable partner of Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain high levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of “a model SHITU” to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environment-friendly than ever. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop ever more effective business solutions.

**Comment from a Stakeholder**

**Masahiko Tomohiko**

Tsunasa Nishikawa

Responsible for environmental technologies, including energy-saving technology for merchant ships, the prevention of air pollution from ships, and protection against oil spills through the use of double-hull structures.

MHI, a reliable partner of Mitsui O.S.K. Lines, Ltd.

Mitsui O.S.K. Lines, Ltd. has purchased a number of merchant ships, such as LNG carriers, container ships, and very large crude oil carriers (VLCCs), from Mitsubishi Heavy Industries, Ltd. The reason that our company chooses MHI is our firm belief in the reliability and quality of MHI products. While there are many overseas products that are attractive in terms of price, the most important characteristic of a product is its performance. MHI merchant ships maintain high levels of safety, reliability, and fuel efficiency while remaining very competitive in terms of value.

MHI is a partner we can trust. We, Mitsui O.S.K. Lines, Ltd., anticipate that MHI will steadily transfer its accumulated technology to the future generation.

The promotion of “a model SHITU” to other forms of transport is essential when considering environmental awareness in the transportation sector. The role of merchant ships will become increasingly more important in this sector, and they themselves are also required to be environment-friendly than ever. We have high expectations that MHI will utilize its comprehensive and extensive technical capabilities to develop ever more effective business solutions.
Environment & Society

Mission
Helping people lead fulfilling lives

Our Environment & Society Business

- Bridges
- Medical equipment
- Humanoid home-use robot
- Environmental systems
- Cultural and sports facilities

MHI’s Approach

Using our manufacturing expertise, Mitsubishi Heavy Industries, Ltd (MHI) provides infrastructural products to help all the people in the world realize fulfilling lives.

In relation to social infrastructure development, MHI deals with a wide range of materials from social bases such as steel bridges, steel pipes and tanks, hydraulic gates, tunnel-boring machinery, and other facilities to cultural, sports and leisure facilities such as multi-purpose domes and Ferris wheels.

In relation to environment conservation, starting with a PCB hydrothermal decomposition plant that completely detoxifies PCBs in heated water, we have built a track record such as the purification of PCB-contaminated soil, biomass utilization systems, next-generation waste incineration plants, flue gas desulfurization equipment, and the CO₂-recovery system from flue gas that restrains global warming and plays an important role in creating a recycle-oriented society. A rapid worsening of the environmental burden due to the economic growth of developing countries is expected on a global scale, and to solve this problem, we make our best effort to provide the products mentioned above as well as advanced technologies.

In addition, MHI is actively engaged in new businesses such as humanoid home-use robots and medical equipment to contribute to an aging, welfare society. We hope our products and technology will support affluent societies where people can live in harmony with the environment.

Central Ferris wheel
The world’s first Ferris wheel without a center shaft creates more entertainment space at the base.

Flue gas desulfurization system
Eliminates more than 95% of SO₂ emitted from utility boilers, greatly contributing to preventing air pollution.

PCB treatment system
Completely detoxifies PCBs in heated water. The side products are water, salt, and CO₂ that do not require secondary treatment.

Humanoid home-use robot (wakamaru)
Humanoid home-use robot for domestic use responding to an aging, welfare society.

Series of products responding to the various needs of the new age

Environment & Society

Medium-Term Business Plan (2004-2007)

Composition of Orders received

Orders (Unit: 100 million yen)

- 1,800
- 3,000
- 10%
- 100%
- 2002
- 2007

Comment from a Stakeholder

Dr. of Engineering, Makoto Akai

Specialized in assessment of energy & environmental technologies, while I have worked on CCS research since the late ‘80s, and I take part in writing the IPCC report with prominent researchers in the world including MHI researchers. MHI focused on studying CO₂ capture ahead of the rest of the world, and still realizes world-leading technology.

I believe that harmonizing the four elements of renewable energy, rational use of energy, nuclear power, and CCS is important to reduce CO₂ emission, and I would like MHI to continue to focus on developing technologies in these areas. Since there is a gap between the image that general public have of MHI and the actual figures, I suggest that MHI promote public communication to eliminate the gap.

MHI Social and Environmental Report 2004
**Environment & Society**

**Mission**

Helping people lead fulfilling lives

---

**Our Environment & Society Business**

- Bridges
- Medical equipment
- Humanoid home-use robot
- Environmental systems
- Cultural and sports facilities
- PCB treatment system

---

**MHI’s Approach**

Using our manufacturing expertise, Mitsubishi Heavy Industries, Ltd (MHI) provides infrastructural products to help all the people in the world realize fulfilling lives.

In relation to social infrastructure development, MHI deals with a wide range of materials from social bases such as steel bridges, steel pipes and tanks, hydraulic gates, tunnel-boring machinery, and other facilities to cultural, sports and leisure facilities such as multi-purpose domes and Ferris wheels.

In relation to environment conservation, starting with a PCB hydrothermal decomposition plant that completely detoxifies PCBs in heated water, we have built a track record such as the purification of PCB-contaminated soil, biomass utilization systems, next-generation waste incineration plants, flue gas desulfurization equipment, and the CO₂-recovery system from flue gas that restrains global warming and plays an important role in creating a recycle-oriented society. A rapid worsening of the environmental burden due to the economic growth of developing countries is expected on a global scale, and to solve this problem, we make our best effort to provide the products mentioned above as well as advanced technologies.

In addition, MHI is actively engaged in new businesses such as humanoid home-use robots and medical equipment to contribute to an aging, welfare society. We hope our products and technology will support affluent societies where people can live in harmony with the environment.

---

**Series of products responding to the various needs of the new age**

- "Careless" Ferris wheel: The world’s first Ferris wheel without a center shaft creates a new entertainment with the inverse cone structure.
- Flue gas desulfurization system: Completely detaches SO₂ in heated water. The side products of water, salt, and CO₂ that do not require secondary treatment.
- PCB treatment system: Completely detaches PCBs in heated water. A side product is water, salt, and CO₂ that do not require secondary treatment.
- Humanoid home-use robot (wakamaru): Humanoid home-use robot for domestic use responding to an aging, welfare society.

---


<table>
<thead>
<tr>
<th>Year</th>
<th>Composition at Orders received</th>
<th>Orders (Unit: 100 million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1,800</td>
<td>1,700</td>
</tr>
<tr>
<td>2007</td>
<td>3,000</td>
<td>3,000</td>
</tr>
</tbody>
</table>

---

**Comment from a Stakeholder**

Dr. of Engineering, Makoto Akai

Specialized in assessment of energy & environmental technologies, and now serves as a Coordinating Lead Author of IPCC’s Special Report on Carbon Dioxide Capture and Storage.

Expectations of MHI’s top runner in preventing climate change:

CO₂ capture and sequestration (CCS) technology is receiving global attention as a measure for greatly reducing atmospheric CO₂ emission. My recent research is related to assessment of energy & environmental technologies, while I have worked on CCS research since the late ’80s, and I take part in writing the IPCC report with prominent researchers in the world including MHI researchers. MHI focused on studying CO₂ capture ahead of the rest of the world, and still realizes world-leading technology.

I believe that harmonizing the four elements of renewable energy, rational use of energy, nuclear power, and CCS is important to reduce CO₂ emission, and I would like MHI to continue to focus on developing technologies in these areas. Since there is a gap between the image that general public have of MHI and the actual figures, I suggest that MHI promote public communication to eliminate the gap.
Industries

Support manufacturing activities worldwide

Mission

Special Feature 1 The Role of Mitsubishi Heavy Industries, Ltd.: Toward the Realization of a Sustainable Society

We provide the technologies and products required for various manufacturing activities in the world. Regarding chemical plant-related matters, not only have we engaged in the construction, equipment manufacturing, and engineering of broad range of plants such as those for petroleum chemistry, but we have also taken charge of manufacturing dimethyl ether (DME), expected as a new, “clean energy medium for the 21st century.” Furthermore, we are vigorously developing innovative technology that recovers CO2 from flue gas, a cause of global warming, and retain it under ground.

As mechanical facilities, we handle various products such as compressors, steel-making machinery, machine tools, injection molding machinery, printing machinery, pulp & paper machinery, and air-conditioners.

In relation to air-conditioning and refrigeration products, we have developed a turbo refrigerator that realizes the world’s best energy efficiency as well as preventing ozone layer destruction and contributing to energy saving.

In relation to injection molding machinery, we have developed an electric motor-driven type, and have realized significant energy and space saving compared to the existing hydraulic type.

In relation to printing machinery and pulp & paper machinery, moreover, we have realized energy and resource savings by applying motor control that eliminates the drive shaft, as well as life extension by using new materials. Regarding machine tools, we have developed a complete dry-cut gear-cutting system that does not use cutting oil, and we have realized clean, safe working environments.

Built in various industrial sites in developing countries that show rapid economic development, the above products contribute to reducing the environmental burden of the whole world as well as to environment conservation in advanced counties.

MHI’s Approach

Our business to support Industries

We provide the technologies and products required for various manufacturing activities in the world. Regarding chemical plant-related matters, not only have we engaged in the construction, equipment manufacturing, and engineering of broad range of plants such as those for petroleum chemistry, but we have also taken charge of manufacturing dimethyl ether (DME), expected as a new, “clean energy medium for the 21st century.” Furthermore, we are vigorously developing innovative technology that recovers CO2 from flue gas, a cause of global warming, and retain it under ground.

As mechanical facilities, we handle various products such as compressors, steel-making machinery, machine tools, injection molding machinery, printing machinery, pulp & paper machinery, and air-conditioners.

In relation to air-conditioning and refrigeration products, we have developed a turbo refrigerator that realizes the world’s best energy efficiency as well as preventing ozone layer destruction and contributing to energy saving.

In relation to injection molding machinery, we have developed an electric motor-driven type, and have realized significant energy and space saving compared to the existing hydraulic type.

In relation to printing machinery and pulp & paper machinery, moreover, we have realized energy and resource savings by applying motor control that eliminates the drive shaft, as well as life extension by using new materials. Regarding machine tools, we have developed a complete dry-cut gear-cutting system that does not use cutting oil, and we have realized clean, safe working environments.

Built in various industrial sites in developing countries that show rapid economic development, the above products contribute to reducing the environmental burden of the whole world as well as to environment conservation in advanced counties.

Medium-Term Business Plan (2004-2007)

Composition of Orders Received

Orders

Medium- and long-term manufactured machinery

Mass and medium-lot manufactured machinery

64% 24%

26% 12% 4%

Orders (Unit: 100 million yen)

2002

2003

2004

2005

2006

2007

24%

12%

4%

26%

16%

16%

13%

7,400

5,700

800

1,300

1,800

Medium-Term Business Plan (2004-2007)

Medium- and long-term manufactured machinery

Mass and medium-lot manufactured machinery

64% 24%

26% 12% 4%

Orders (Unit: 100 million yen)

2002

2003

2004

2005

2006

2007

24%

12%

4%

26%

16%

16%

13%

7,400

5,700

800

1,300

1,800

Comment from a stakeholder

Chairman of one of leading printing companies in Guangdong, China. The company is introducing printing machines manufactured by MHI.

Satisfactory products and services, anticipating MHI’s consideration for the environment

It has been 20 years since we first introduced printing machines manufactured by MHI. Before this, we used printing machines made in Germany. However, we replaced the German printing machines with those of MHI since the printing speed of the MHI’s machines was about 20% faster; they were easy to operate, and the price was reasonable. Since then, we have bought 15 machines including web offset presses and sheet-fed offset presses, and we regard MHI as an old friend. We are satisfied with their services. Their customer centers are located in four cities in China, and they send their staff for repair within four hours of calling them.

We worry most about water pollution related to printing machines. After printing, a large amount of wastewater including ink and alcohol is discharged. Recently, people in China are increasingly interested in environmental preservation. As long as MHI develops environment-friendly printing machines in the same way as other manufacturers in Europe, MHI can contribute to the natural environment, and appeal to the Chinese market.

Products contributing to industrial development

Compression and liquid chiller

In relation to air-conditioning and refrigeration products, we have developed a turbo refrigerator that realizes the world’s best energy efficiency as well as preventing ozone layer destruction and contributing to energy saving.

Regarding chemical plant-related matters, not only have we engaged in the construction, equipment manufacturing, and engineering of broad range of plants such as those for petroleum chemistry, but we have also taken charge of manufacturing dimethyl ether (DME), expected as a new, “clean energy medium for the 21st century.” Furthermore, we are vigorously developing innovative technology that recovers CO2 from flue gas, a cause of global warming, and retain it under ground.

As mechanical facilities, we handle various products such as compressors, steel-making machinery, machine tools, injection molding machinery, printing machinery, pulp & paper machinery, and air-conditioners.

In relation to air-conditioning and refrigeration products, we have developed a turbo refrigerator that realizes the world’s best energy efficiency as well as preventing ozone layer destruction and contributing to energy saving.

In relation to injection molding machinery, we have developed an electric motor-driven type, and have realized significant energy and space saving compared to the existing hydraulic type.

In relation to printing machinery and pulp & paper machinery, moreover, we have realized energy and resource savings by applying motor control that eliminates the drive shaft, as well as life extension by using new materials. Regarding machine tools, we have developed a complete dry-cut gear-cutting system that does not use cutting oil, and we have realized clean, safe working environments.

Built in various industrial sites in developing countries that show rapid economic development, the above products contribute to reducing the environmental burden of the whole world as well as to environment conservation in advanced counties.

MHI’s Approach

Support manufacturing activities worldwide

Mission
Industries
Support manufacturing activities worldwide

Mission

Our business to support Industries

- Machine tools
- Pulp & paper machinery
- Steelmaking machinery
- Chemical plants
- Air-conditioners

MHI’s Approach

We provide the technologies and products required for various manufacturing activities in the world. Regarding chemical plant-related matters, not only have we engaged in the construction, equipment manufacturing, and engineering of a broad range of plants such as those for petroleum chemistry, but we have also taken charge of manufacturing dimethyl ether (DME), expected as a new, “clean energy medium for the 21st century.” Furthermore, we are vigorously developing innovative technology that recovers CO₂ from flue gas, a cause of global warming, and retain it under ground.

As mechanical facilities, we handle various products such as compressors, steel-making machinery, machine tools, injection molding machinery, printing machinery, pulp & paper machinery, and air-conditioners. In relation to air-conditioning and refrigeration products, we have developed a turbo refrigerator that realizes the world’s best energy efficiency as well as preventing ozone layer destruction and contributing to energy saving.

In relation to injection molding machinery, we have developed an electric motor-driven type, and have realized significant energy and space saving compared to the existing hydraulic type. In relation to printing machinery and pulp & paper machinery, moreover, we have realized energy and resource savings by applying motor control that eliminates the drive shaft, as well as life extension by using new materials. Regarding machine tools, we have developed a complete dry-cut gear-cutting system that does not use cutting oil, and we have realized clean, safe working environments.

Built in various industrial sites in developing countries that show rapid economic development, the above products contribute to reducing the environmental burden of the whole world as well as to environment conservation in advanced counties.

Medium-Term Business Plan (2004-2007)

Composition of Orders Received

<table>
<thead>
<tr>
<th>Orders (Unit: 100 million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass and medium-lot manufactured machinery (general machinery and special vehicles)</td>
</tr>
<tr>
<td>Printing machinery</td>
</tr>
<tr>
<td>Compressors</td>
</tr>
<tr>
<td>Steel-making machinery</td>
</tr>
<tr>
<td>Air-conditioners</td>
</tr>
<tr>
<td>Chemical plants</td>
</tr>
<tr>
<td>Pulp &amp; paper machinery</td>
</tr>
</tbody>
</table>

Comment from a stakeholder

Chairman

Thomas Chung
Chairman of one of leading printing companies in Guangdong, China. The company is introducing printing machines manufactured by MHI.

Satisfactory products and services, anticipating MHI’s consideration for the environment

It has been 20 years since we first introduced printing machines manufactured by MHI. Before this, we used printing machines made in Germany. However, we replaced the German printing machines with those of MHI since the printing speed of the MHI’s machines was about 20% faster. They were easy to operate, and the price was reasonable. Since then, we have bought 15 machines including web offset presses and sheet-fed offset presses, and we regard MHI as an old friend. We are satisfied with their services. Their customer centers are located in four cities in China, and they send their staff for repair within four hours of calling them.

We worry most about water pollution related to printing machines. After printing, a large amount of wastewater including ink and alcohol is discharged. Recently, people in China are increasingly interested in environmental preservation. As long as MHI develops environment-friendly printing machines in the same way as other manufacturers in Europe, MHI can contribute to the natural environment, and appeal to the Chinese market.

Media

Composition of Orders Received

<table>
<thead>
<tr>
<th>Orders (Unit: 100 million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass and medium-lot manufactured machinery (general machinery and special vehicles)</td>
</tr>
<tr>
<td>Printing machinery</td>
</tr>
<tr>
<td>Compressors</td>
</tr>
<tr>
<td>Steel-making machinery</td>
</tr>
<tr>
<td>Air-conditioners</td>
</tr>
<tr>
<td>Chemical plants</td>
</tr>
<tr>
<td>Pulp &amp; paper machinery</td>
</tr>
</tbody>
</table>

Comment from a stakeholder

Chairman

Thomas Chung
Chairman of one of leading printing companies in Guangdong, China. The company is introducing printing machines manufactured by MHI.

Satisfactory products and services, anticipating MHI’s consideration for the environment

It has been 20 years since we first introduced printing machines manufactured by MHI. Before this, we used printing machines made in Germany. However, we replaced the German printing machines with those of MHI since the printing speed of the MHI’s machines was about 20% faster. They were easy to operate, and the price was reasonable. Since then, we have bought 15 machines including web offset presses and sheet-fed offset presses, and we regard MHI as an old friend. We are satisfied with their services. Their customer centers are located in four cities in China, and they send their staff for repair within four hours of calling them.

We worry most about water pollution related to printing machines. After printing, a large amount of wastewater including ink and alcohol is discharged. Recently, people in China are increasingly interested in environmental preservation. As long as MHI develops environment-friendly printing machines in the same way as other manufacturers in Europe, MHI can contribute to the natural environment, and appeal to the Chinese market.
To realize a sustainable society, MHI fulfills its social responsibility based on contribution to the environment.

A number of dangerous situations have emerged such as the rapid increase in energy consumption, the rapid increase in environmental burden such as CO₂ production, population explosion, starvation and poverty, climate change, destruction of ecosystems, and shortage of food and water.

Considering this situation, Earth Summit 1992 explicitly established the goal of perpetuating all living creatures. To achieve this goal, we make efforts to develop and provide highly reliable, unique technologies and products. In this special feature, we report the contribution of our activities to the environmental field.

Pages 19 to 24 focus on "nuclear power," "CO₂ recovery," and "renewable energy," all of which are countermeasures against global warming among our various activities relating to the environment.
To realize a sustainable society, MHI fulfills its social responsibility based on contribution to the environment. A number of dangerous situations have emerged such as the rapid increase in energy consumption, the rapid increase in environmental burden such as CO₂ production, population explosion, starvation and poverty, climate change, destruction of ecosystems, and shortage of food and water. Considering this situation, Earth Summit 1992 explicitly established the goal of perpetuating all living creatures. To achieve this goal, we make efforts to develop and provide highly reliable, unique technologies and products. In this special feature, we report the contribution of our activities to the environmental field.

---

**Countermeasures against Global Warming**

- Integrated coal gasification combined cycle (IGCC)
- Steam turbines
- Gas turbines
- Boilers
- Diesel engines
- Energy-saving & resource-saving

---

**Air, Soil and Water Pollution**

- Gas engine power generation
- Centrifugal Liquid chillers
- Electric-injection molding machine
- Printing machinery
- Air-conditioners

---

**Greening of Deserts**

- Nuclear power generation
- CO₂ recovery/underground retention system
- Renewable energy
- Waste incinerators
- Fuel cells
- PCB treatment systems
- Waste treatment facilities
- CNG forklift truck
- Desert greening project
- Integrated coal gasification combined cycle (IGCC)
- Conventional power
- Integrated gasification combined cycle (IGCC)
- Gas engines
- Steam turbines
- Diesel engines
- Energy-saving & resource-saving

---

For more information, visit the following URLs:
- http://www.sdia.or.jp/mhikobe/index.html

---

*Flue gas desulfurization systems refer to the following URLs regarding NOx removal technologies contributing to acid rain measures that are effective in protecting forests.*

---

Pages 19 to 24 focus on "nuclear power," "CO₂ recovery," and "renewable energy," all of which are countermeasures against global warming among our various activities relating to the environment.
Ensuring Safety while Responding to Energy Demands

Global warming and oil depletion but increasing demands for energy: How do we overcome these two conflicting issues in modern society?

There are various means of supplying energy in today’s world: fossil fuel, hydraulic power, nuclear power, wind power, solar energy, geothermal power and biomass, to name a few. Each technology has its own merits and demerits, and none of them can meet all of today’s energy demands alone. The most suitable combination, i.e., “the optimal mix,” must be identified for each country and region. As a measure against global warming and to secure energy, MHI offers nuclear energy as an effective option. MHI’s nuclear power activities are presented below.

Merits and Demerits of Nuclear Power Generation

Nuclear power generation refers to harnassing thermal energy produced from the fission of uranium to create steam, and using this steam to drive a steam turbine to generate power. Nuclear power plants are operated and managed by power companies, and MHI manufactures the equipment for these companies.

With nuclear power generation, a great quantity of heat can be produced using a small amount of resources. Because nuclear power generation does not use fossil fuels, CO2 is not emitted. For this reason, Japan and other countries consider nuclear power to be a major measure against global warming. On the other hand, nuclear power generation produces waste that emits radiation, making waste management a critical issue.

At present, some countries such as Sweden, Germany and Italy rely on France for nuclear power generation and have made it a policy to import nuclear energy, while other countries such as China and Korea are promoting domestic nuclear power generation.

Reduction in CO2 Emissions by Nuclear Power Generation (Japan)

In its report of 2001, the Intergovernmental Panel on Climate Change (IPCC) predicted that the average temperature of the Earth will increase by between 1.4 and 5.8 degrees Celsius by 2100 due to the increase in the concentration of greenhouse gases such as CO2. If this prediction becomes reality, not only will there be coastal area flooding due to the rise in seawater level, but there will also be adverse effects on agricultural production, the occurrence of natural disasters such as flooding and drought due to climate change, and the spread of infectious diseases, thereby significantly affecting the lives of everyone.

Today’s global warming is mainly caused by CO2 emissions resulting from factors such as energy consumption by industrialized nations. In the 3rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) that took place in 1997, the Kyoto Protocol was adopted, and goals for greenhouse gas reduction were set for each country. However, there is a limit to the amount of energy that can be reduced. To prevent global warming, partial replacement of fossil fuels with alternative energy sources is necessary. MHI considers nuclear power, a type of energy that does not emit CO2, an effective option.

Stable Energy Supply and Nuclear Power

Fossil fuels are becoming problematic: oil and natural gas are expected to be depleted by the next century, and great amounts of CO2 and SOx are emitted from coal. Hydraulic power, while a recyclable resource, may greatly affect eco-systems due to dam development and is limited to areas rich in water resources. In addition, natural energies such as wind power, solar power, geothermal power and biomass cannot at present sufficiently respond to the energy demands of the world, even though MHI is involved in developing and supplying related equipment.

On the other hand, according to the International Energy Agency (IEA), the world’s energy demand is expected to increase by 57% by 2030 compared to the 1997 figure due to the rapid increase in the power requirements of emerging countries and developing countries.

An assured, stable energy supply around the globe will be difficult to achieve without the use of nuclear power.

Ensuring Nuclear Power Safety

For nuclear power to remain a source of energy, safety must first be ensured. On the premise that machines fail and human beings make mistakes, we have constructed numerous layers of countermeasures to ensure that if an accident does occur at a nuclear power plant, the area outside the plant will not be affected.

These efforts do not end with completion of the plant construction. Instead, we have set up a framework in which information on any problems, regardless of scale, is immediately shared amongst all nations, and countermeasures are put in place accordingly.

The 21st century has brought with it a global trend in reevaluating nuclear power as a measure against global warming, with Europe and the United States making increasing efforts to update the various equipment used at their respective nuclear power stations.

Global Warming and Nuclear Power

Working to Ensure a Correct Understanding of Nuclear Power

MHI’s Commitment to Environmental Issues

For nuclear power to remain a source of energy, safety is essential. To deepen public understanding, our organization conducts advanced technological explanations according to the target audience.

It is important that we keep an open dialogue regarding the necessity for nuclear power generation and the related safety measures taken, presenting technical explanations according to the target audience.
Global warming and oil depletion but increasing demands for energy: How do we overcome these two conflicting issues in modern society? There are various means of supplying energy in today’s world: fossil fuel, hydraulic power, nuclear power, wind power, solar energy, geothermal power and biomass, to name a few. Each technology has its own merits and demerits, and none of them can meet all of today's energy demands alone. The most suitable combination, i.e., “the optimal mix,” must be identified for each country and region. As a measure against global warming and to ensure energy, MHI offers nuclear energy as an effective option. MHI’s nuclear power activities are presented below.

Merits and Demerits of Nuclear Power Generation

Nuclear power generation refers to harnassing thermal energy produced from the fission of uranium to create steam, and using this steam to drive a steam turbine to generate electricity. Nuclear power plants are operated and managed by power companies, and MHI manufactures the equipment for these companies.

With nuclear power generation, a great quantity of heat can be produced using a small amount of resources. Because nuclear power generation does not use fossil fuels, CO2 is not emitted. For this reason, Japan and other countries consider nuclear power to be a major measure against global warming. On the other hand, nuclear power generation produces waste that emits radiation, making waste management a critical issue. At present, some countries such as Sweden, Germany and Italy rely on France for nuclear power generation and have made it a policy to import nuclear energy, while other countries such as China and Korea are promoting domestic nuclear power generation.

Global warming and CO2 emissions resulting from factors such as energy consumption by industrialized nations. In the 3rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) that took place in 1997, the Kyoto Protocol was adopted, and goals for greenhouse gas reduction were set for each country. However, there is a limit to the amount of energy that can be reduced. To prevent global warming, partial replacement of fossil fuels with alternative energy sources is necessary. MHI considers nuclear power, a type of energy that does not emit CO2, an effective option.

Stable Energy Supply and Nuclear Power

Fossil fuels are becoming problematic: oil and natural gas are expected to be depleted by the next century, and great amounts of CO2 and SOx are emitted from coal. Hydraulic power, while a recyclable resource, may greatly affect aquatic systems due to dam development and is limited to areas rich in water resources. In addition, natural energies such as wind power, solar power, geothermal power and biomass cannot at present sufficiently respond to the energy demands of the world, even though MHI is involved in developing and supplying related equipment.

Ensuring Nuclear Power Safety

For nuclear power to remain a source of energy, safety must first be ensured. On the premise that machines fail and human beings make mistakes, we have constructed numerous layers of countermeasures to ensure that if an accident does occur at a nuclear power plant, the area outside the plant will not be affected. These efforts do not end with completion of the plant construction. Instead, we have set up a framework in which information on any problems, regardless of scale, is immediately shared amongst all nations, and countermeasures are put in place accordingly.

The 21st century has brought with it a global trend in reevaluating nuclear power as a measure against global warming, with Europe and the United States making increasing efforts to update the various equipment used at their respective nuclear power stations.
CO2 Recovery

Today, we are facing global warming, a serious environmental problem. What measures are effective in solving this problem?

Let us think about the causes of the global warming. Green house gases include CO2, methane gas, and chlorofluorocarbon, and among these gases, CO2 is said to contribute to about 60% of global warming. CO2 is in most cases emitted by the combustion of fossil fuel, and a particularly large amount of CO2 is emitted from thermal power plants. That is, it would be very effective if CO2 generation from the thermal power plants were reduced. However, it is currently difficult to restrain the operation of thermal power plants because the demand for electric power is globally increasing.

Is it possible to recover the CO2 already emitted? With Kansai Electric Power Co., Inc. (KEPCO), MHI has developed a technology for recovering CO2 emitted mainly from power-generation plants since 1991. In this section, we show you the entire picture of CO2-recovery technology and the ability to solve the problem of global warming.

How can CO2 be recovered?

As concern over global warming increases, CO2-recovery technology is starting to receive world attention, and the Intergovernmental Panel on Climate Change (IPCC) is also discussing this technology. CO2 recovery from natural gas is well known, but CO2 recovery from flue gas has not been conducted widely since it is technically very difficult and not much demand in early 1990’s. The following methods can be listed as methods of recovering CO2 from exhaust gas: the chemical absorption method that assimilates CO2 in fluid, the physical adsorption method that adsorbs CO2 to solid adsorption agents, and the membrane method that separates CO2 using polymer membrane.

KEPCO and MHI researchers selected the chemical absorption method. This choice worked well. Since the method is similar to the flue gas desulfurization technology, we were able to realize facility-scale expansion. The technology first cools hot flue gas from a thermal power plant to a temperature appropriate for CO2 absorption. The cooled gas then comes into contact with an amine series liquid solution to absorb the CO2. After heating the absorbing solution with steam, nearly 100% pure CO2 can be extracted.

Concurrently Solving the Problems of the Depletion of Energy Resources and Global Warming

EOR is a technology that improves crude oil recovery ratio in oil reservoirs by injecting CO2. When CO2 is injected into the oil reservoir, CO2 is dispersed into the crude oil, and it significantly reduces oil viscosity and increases flow ability. As a result, the recovery rate of crude oil increases by 40%. Combining this EOR with CO2 recovery, we can concurrently realize a reduction in CO2 emission and enhancement of oil recovery. We are currently designing a plant that recovers 3000 tons of CO2 per day for oil-producing countries in the Middle East. The plant also utilizes EOR.

We are also evaluating the economic viability of EOR in a thermal power-generation plant in Vietnam. It is expected that the Bach Ho oilfield, the largest oilfield in Vietnam, will be depleted in the future. If CO2 emitted from the neighboring power-generation plants are recovered and injected to the oilfield, it will contribute to environmental protection and economic development in Vietnam.

Hereafter, we will look for areas suitable for the CO2-recovery business, and develop CO2-recovery business there. If the Kyoto Protocol becomes effective, the economic viability of this technology will further improve due to CO2 emission trading.

Utilizing our integrated technologies, we will extensively focus on countermeasures against global warming from recovery to sequestration.


**CO₂ Recovery**

Today, we are facing global warming, a serious environmental problem. What measures are effective in solving this problem?

Let us think about the causes of the global warming. Greenhouse gases include CO₂, methane gas, and chlorofluorocarbon, and among these gases, CO₂ is said to contribute to about 60% of global warming. Green house gases include CO₂, methane gas, and chlorofluorocarbon, and among these gases, CO₂ is said to contribute to about 60% of global warming. Green house gases include CO₂, methane gas, and chlorofluorocarbon, and among these gases, CO₂ is said to contribute to about 60% of global warming.

**Special Feature 2**

As concern over global warming increases, CO₂-recovery technology is starting to receive world attention. However, overseas electric power companies thought that the technology could not be realized as a countermeasure against global warming. Our researchers studied various methods to lower cost. By improving the absorbing solution, we enhanced the CO₂ absorption rate to more than 90%, reduced the amount of energy required for CO₂ recovery, and pursued economy of scale by increasing the recovery plant.

**How can CO₂ be recovered?**

As concern over global warming increases, CO₂-recovery technology is starting to receive world attention. However, overseas electric power companies thought that the technology could not be realized as a countermeasure against global warming. Our researchers studied various methods to lower cost. By improving the absorbing solution, we enhanced the CO₂ absorption rate to more than 90%, reduced the amount of energy required for CO₂ recovery, and pursued economy of scale by increasing the recovery plant.

**The Accumulation of MHI’s Technologies is Utilized**

When our researchers started developing CO₂-recovery technology from exhaust combustion gas, society paid attention. However, overseas electric power companies thought that the technology could not be realized as a countermeasure against global warming. Our researchers studied various methods to lower cost. By improving the absorbing solution, we enhanced the CO₂ absorption rate to more than 90%, reduced the amount of energy required for CO₂ recovery, and pursued economy of scale by increasing the recovery plant.

**How Should Recovered CO₂ be Used?**

Recovered CO₂ has conventionally been used to produce carbonated drinks, soda ash, and urea. Use for food products and chemicals like these are very limited in volume, and recovered CO₂ is emitted from thermal power plants. That is, it would be very effective if CO₂ generation from the thermal power plants were reduced. However, it is currently difficult to restrain the operation of thermal power plants because the demand for electric power is globally increasing. Is it possible to recover the CO₂ already emitted?

With Kansai Electric Power Co., Inc. (KEPCO), MHI has developed a technology for recovering CO₂ emitted mainly from power-generation plants since 1991. In this section, we show you the entire picture of CO₂-recovery technology and the ability to solve the problem of global warming.

**Concurrently Solving the Problems of the Depletion of Energy Resources and Global Warming**

EOR is a technology that improves crude oil recovery ratio in oil reservoirs by injecting CO₂. When CO₂ is injected into the oil reservoir, CO₂ is dissolved into the crude oil, and it significantly reduces oil viscosity and increases flowability. As a result, the recovery ratio of crude oil increases by 40%. Combining this EOR with CO₂ recovery, we can concurrently realize a reduction in CO₂ emission and enhancement of oil recovery. We are currently designing a plant that recovers 3000 tons of CO₂ per day for oil-producing countries in the Middle East. The plant also utilizes EOR.

We are also evaluating the economic viability of EOR in a thermal power-generation plant in Vietnam. It is expected that the Bach Ho oilfield, the largest oilfield in Vietnam, will be depleted in the future. If CO₂ emitted from the neighboring power-generation plants are recovered and injected to the oilfield, it will contribute to environmental protection and economic development in Vietnam. Hereafter, we will look for areas suitable for the CO₂-recovery business, and develop CO₂-recovery business there. If the Kyoto Protocol becomes effective, the economic viability of this technology will further improve due to CO₂ emission trading.

**Comment by a staff member in charge**

Masaki Iijima

Machinery Headquarters Plant and Transportation System Engineering & Construction Center CO₂ Business Promotion Group Leader

In 1991, we started developing CO₂-recovery technology from flue gases in conjunction with Kansai Electric Power Co., Inc. (KEPCO), while no other companies were working on CO₂ recovery at this time because they thought there would be no demand for it. Many overseas visitors came to our test plant, and they were amazed. Now, CO₂-recovery technology is receiving world attention. I believe that KEPCO, who offered joint development of the technology with us, have foresight. We would like to expand the business, further improving business efficiency.

**Recovered CO₂ Utilization**

Today, we are facing global warming, a serious environmental problem. What measures are effective in solving this problem?

Let us think about the causes of the global warming. Green house gases include CO₂, methane gas, and chlorofluorocarbon, and among these gases, CO₂ is said to contribute to about 60% of global warming. Green house gases include CO₂, methane gas, and chlorofluorocarbon, and among these gases, CO₂ is said to contribute to about 60% of global warming.

**The Accumulation of MHI’s Technologies is Utilized**

When our researchers started developing CO₂-recovery technology from exhaust combustion gas, society paid attention. However, overseas electric power companies thought that the technology could not be realized as a countermeasure against global warming. Our researchers studied various methods to lower cost. By improving the absorbing solution, we enhanced the CO₂ absorption rate to more than 90%, reduced the amount of energy required for CO₂ recovery, and pursued economy of scale by increasing the recovery plant.

**How Should Recovered CO₂ be Used?**

Recovered CO₂ has conventionally been used to produce carbonated drinks, soda ash, and urea. Use for food products and chemicals like these are very limited in volume, and recovered CO₂ is emitted from thermal power plants. That is, it would be very effective if CO₂ generation from the thermal power plants were reduced. However, it is currently difficult to restrain the operation of thermal power plants because the demand for electric power is globally increasing. Is it possible to recover the CO₂ already emitted?

With Kansai Electric Power Co., Inc. (KEPCO), MHI has developed a technology for recovering CO₂ emitted mainly from power-generation plants since 1991. In this section, we show you the entire picture of CO₂-recovery technology and the ability to solve the problem of global warming.

**Concurrently Solving the Problems of the Depletion of Energy Resources and Global Warming**

EOR is a technology that improves crude oil recovery ratio in oil reservoirs by injecting CO₂. When CO₂ is injected into the oil reservoir, CO₂ is dissolved into the crude oil, and it significantly reduces oil viscosity and increases flowability. As a result, the recovery ratio of crude oil increases by 40%. Combining this EOR with CO₂ recovery, we can concurrently realize a reduction in CO₂ emission and enhancement of oil recovery. We are currently designing a plant that recovers 3000 tons of CO₂ per day for oil-producing countries in the Middle East. The plant also utilizes EOR.

We are also evaluating the economic viability of EOR in a thermal power-generation plant in Vietnam. It is expected that the Bach Ho oilfield, the largest oilfield in Vietnam, will be depleted in the future. If CO₂ emitted from the neighboring power-generation plants are recovered and injected to the oilfield, it will contribute to environmental protection and economic development in Vietnam. Hereafter, we will look for areas suitable for the CO₂-recovery business, and develop CO₂-recovery business there. If the Kyoto Protocol becomes effective, the economic viability of this technology will further improve due to CO₂ emission trading.

**Comment by a staff member in charge**

Masaki Iijima

Machinery Headquarters Plant and Transportation System Engineering & Construction Center CO₂ Business Promotion Group Leader

In 1991, we started developing CO₂-recovery technology from flue gases in conjunction with Kansai Electric Power Co., Inc. (KEPCO), while no other companies were working on CO₂ recovery at this time because they thought there would be no demand for it. Many overseas visitors came to our test plant, and they were amazed. Now, CO₂-recovery technology is receiving world attention. I believe that KEPCO, who offered joint development of the technology with us, have foresight. We would like to expand the business, further improving business efficiency.
Renewable Energy

The world is expecting natural energy to be a countermeasure against global warming and depletion of oil resources. Natural energy such as biomass, wind power, solar power, small-scale hydropower and so on reduces the effect on the environment and is utilized through natural circulation. It emits hardly any CO2 or toxic materials and moreover contributes to local revitalization.

Natural energy, however, currently makes up only 4% of the total supply of the primary energy in OECD countries. In some advanced countries, natural energy makes up a significant rate of the primary energy supply, as in Iceland where 60% of the primary energy is supplied by geothermal power. Now, the practical application of natural energy is being enhanced on a global scale as an environmentally- and economically-contributing energy.

MHI has been working on development of various natural energy technologies. In this section, we introduce wind power and biomass, both of which are expected for the future.

Wind power generation is the most rapidly diffusing technology among various natural energies. The world’s wind power-generation capacity has increased by more than six times over the past eight years. The European Wind Energy Association estimates that 12% of the total electric power demand in the world can be covered by wind power generation in 2020. Wind power generation is expected to expand considerably in the world.

We have been working on the development of the wind power generator since 1980. We have already delivered 1,758 generators to various countries in the world. Our wind power-generation business is expanding particularly in recent years, and the orders received in 2003 doubled compared with the previous year.

Wind power generation contributes to local revitalization as well as preventing global warming. The wind power-generation business is Seto Windhill, Ehime Prefecture, funded by us, is an example of such a contribution. Seto Town has suffered from strong winds for years. They worried if there was any way to live with their archenemy, or strong winds. After a lot of thought, the town finally focused on wind power generation. The town started studying the introduction of wind power generation in the 1980s, and established the first generator in 1990. In October 2003, eleven wind power generators with a 1000-kW capacity started operation. The operating body is Seto Windhill Corporation. The company was established with a 90% stake by us and the remaining 10% stake by Seto Town. The power-generation capacity of wind power-generation facilities is 11,000 kW. Power can be provided to 6,850 households. It is the largest-scale wind power-generation facility in the Shikoku and Chugoku Regions. The town is planning town development where wind power-generation facilities are used as the symbol.

The town says that visitors and the sales amount of commercial museums have increased after operation start-up of wind power generation.

We wish to expand our wind power-generation business by four to five times the current scale in a few years. We are also considering business development in China where a sharp increase in electric power demand is expected.

Biomass is currently the most supplied natural energy. Biomass is a general term for animals and plants resources and waste materials stemming from these resources. Combustion, fermentation, and gasification of biomass can produce energy such as heat and electricity. Since CO2 emitted during combustion is fixed or absorbed while such animals and plants are growing, the amount of CO2 emission is regarded as zero, and biomass is thought to be effective for CO2 reduction in that it can be used as an alternative to fossil fuel.

In OECD countries, biomass makes up 80% of the total supply of natural energy. According to the scenario announced by EU, biomass is expected to supply 8.5% of the total energy consumption in 2010.

Our company has been working on the development of various biomass energy technologies as countermeasures against global warming. In 2006, the gasified biomass power-generation businesses is expected to start in Iwate Prefecture. This business has constructed a biomass power-generation plant in Kitakami Farm, located in Shiogama Town, Iwate Prefecture, where livestock waste and food residuals are utilized. The body operating the business is “Biomass Power Shizukushiri Corporation.” The company was jointly established based on investment by Kitakami Farm, MHI, Tohoku Electric Power Engineering & Construction Co., Ltd., Tokyo Sango Co., Ltd., and Shizukushiri Town, and it is the first private company to engage in the biomass business in Japan.

The business collects livestock waste discharged from the farm and food residuals discharged from food companies nearby and local elementary and junior high schools, and they are fermented by methane bacteria. Using generated methane gas, 4 kW of electric power is generated per day. Half of the electric power is used inside the facility, and the residual power is sold to Kitakami Farm. Not only is electric power generated in the plant, but exhaust heat at the time of generating power is used in the livestock waste-composting facility, and the generated compost is sold to Kitakami Farm.

The business does not only create a mechanism for recycling resources and energy but also has social significance. That is, the business contributes to reducing waste materials as well as preventing global warming. Since it creates industries and attracts many inspectors and tourists as well as contributing to reducing the environmental burden and suppressing global warming gas emission, it consequently contributes to local revitalization. Moreover, the business contributes to a recycling-oriented agriculture in that it uses safe, secure compost and liquid fertilizer for agriculture.

Many advantages can be expected from the gasified biomass power-generation business. We expect further development in the future.

There are efforts to create an economy based on environmental conservation by setting natural energy at the core. The world anticipates this challenge that we must take up.
### Renewable Energy

**Shifting to Sustainable Energy**

The world is expecting natural energy to be a countermeasure against global warming and depletion of oil resources. Natural energy such as biomass, wind power, solar power, small-scale hydropower and so on reduces the effect on the environment and is utilized through natural circulation. It emits hardly any CO₂ or toxic materials and moreover contributes to local revitalization.

Natural energy, however, currently makes up only 4% of the total supply of the primary energy in OECD countries. In some advanced countries, natural energy makes up a significant rate of the primary energy supply, as in Iceland where 60% of the primary energy is supplied by geothermal power. Now, the practical application of natural energy is being enhanced on a global scale as an environmentally- and economically-contributing energy.

MHI has been working on development of various natural energy technologies. In this section, we introduce wind power and biomass, both of which are expected for the future.

**Rapidly Expanding Wind Power-generation Areas by Converting their “Archenemy,” Strong Wind, into “Resources”**

Wind power generation is the most rapidly diffusing technology among various natural energies. The world’s wind power-generation capacity has increased by more than six times over the past eight years. The European Wind Energy Association estimates that 12% of the total electric power demand in the world can be covered by wind power generation in 2020. Wind power generation is expected to expand even more.

We have been working on the development of the wind power generator since 1980. We already delivered 1,758 generators to various countries in the world. Our wind power-generation business is expanding particularly in recent years, and the orders received in 2003 doubled compared with the previous year.

Wind power generation contributes to local revitalization as well as preventing global warming. The wind-power-generation business in Seto Town, Ehime Prefecture, funded by us, is an example of such a contribution. Seto Town has suffered from strong winds for years. They wondered if there was any way to live with their archenemy, or strong wind. They wondered if we, is an example of such a contribution. Seto Town has suffered from strong winds for years. They wondered if there was any way to live with their archenemy, or strong wind.

The town says that visitors and the sales amount of commercial museums have increased after operation start-up of wind power generation.

We wish to expand our wind power-generation business by four to five times the current scale in a few years time. We are also considering business development in China where a sharp increase in electric power demand is expected.

**MHI’s Commitment to Environmental Issues**

Biomass is currently the most supplied natural energy. Biomass is a general term for animals and plants resources and waste materials stemming from these resources. Combustion, fermentation, and gasification of biomass can produce energy such as heat and electricity. Since CO₂ emitted during combustion is fixed or absorbed while such animals and plants are growing, the amount of CO₂ emission is regarded as zero, and biomass is thought to be effective for CO₂ reduction in that it can be used as an alternative to fossil fuel.

In OECD countries, biomass makes up 80% of the total supply of natural energy. According to the scenario announced by EU, biomass is expected to supply 8.5% of the total energy consumption in 2010.

Our company has been working on the development of various biomass energy technologies as countermeasures against global warming. In 2006, the gasified biomass power-generation business is expected to start in Iwate Prefecture. This business has constructed a biomass power-generation plant in Koizaki Farm, located in Shizukuishi Town, Iwate Prefecture, where livestock waste and food residuals are utilized. The body operating the business is “Biomass Power Shizukuishi Corporation.” The company was jointly established based on investment by Koizaki Farm, MHI, Tohoku Electric Power Engineering & Construction Co., Ltd., Tokyo Sango Co., Ltd., and Shizukuishi Town, and it is the first private company to engage in the biomass business in Japan.

The business collects livestock waste discharged from the farm and food residuals discharged from food companies nearby and local elementary and junior high schools, and they are fermented by methane bacteria. Using generated methane gas, 4 KW of electric power is generated per day. Half of the electric power is used inside the facility, and the residual power is sold to Koizaki Farm. Not only is electric power generated in the plant, but exhaust heat at the time of generating power is used in the livestock waste-compacting facility, and the generated compost is sold to Koizaki Farm. Digestive fluids left after methane fermentation are used as liquid fertilizer on Koizaki Farm.

This business does not only create a mechanism for recycling resources and energy but also has social significance. That is, the business contributes to reducing waste materials as well as preventing global warming. Since it creates industries and attracts many inspectors and tourists as well as contributing to reducing the environmental burden and suppressing global warming gas emission, it consequently contributes to local revitalization. Moreover, the business contributes to a recycling-oriented agriculture in that it uses safe, secure compost and liquid fertilizer for agriculture.

Many advantages can be expected from the gasified biomass power-generation business. We expect further development in the future.

There are efforts to create an economy based on environmental conservation by setting natural energy at the core. The world anticipates this challenge that we must take up.

**Contributing to Local Communities Utilizing Biomass Power Generation, Aiming for a Recycling Society**

Biomass is a general term for animals and plants resources and waste materials stemming from these resources. Combustion, fermentation, and gasification of biomass can produce energy such as heat and electricity. Since CO₂ emitted during combustion is fixed or absorbed while such animals and plants are growing, the amount of CO₂ emission is regarded as zero, and biomass is thought to be effective for CO₂ reduction in that it can be used as an alternative to fossil fuel.

In OECD countries, biomass makes up 80% of the total supply of natural energy. According to the scenario announced by EU, biomass is expected to supply 8.5% of the total energy consumption in 2010.

Our company has been working on the development of various biomass energy technologies as countermeasures against global warming. In 2006, the gasified biomass power-generation business is expected to start in Iwate Prefecture. This business has constructed a biomass power-generation plant in Koizaki Farm, located in Shizukuishi Town, Iwate Prefecture, where livestock waste and food residuals are utilized. The body operating the business is “Biomass Power Shizukuishi Corporation.” The company was jointly established based on investment by Koizaki Farm, MHI, Tohoku Electric Power Engineering & Construction Co., Ltd., Tokyo Sango Co., Ltd., and Shizukuishi Town, and it is the first private company to engage in the biomass business in Japan.

The business collects livestock waste discharged from the farm and food residuals discharged from food companies nearby and local elementary and junior high schools, and they are fermented by methane bacteria. Using generated methane gas, 4 KW of electric power is generated per day. Half of the electric power is used inside the facility, and the residual power is sold to Koizaki Farm. Not only is electric power generated in the plant, but exhaust heat at the time of generating power is used in the livestock waste-compacting facility, and the generated compost is sold to Koizaki Farm. Digestive fluids left after methane fermentation are used as liquid fertilizer on Koizaki Farm.

This business does not only create a mechanism for recycling resources and energy but also has social significance. That is, the business contributes to reducing waste materials as well as preventing global warming. Since it creates industries and attracts many inspectors and tourists as well as contributing to reducing the environmental burden and suppressing global warming gas emission, it consequently contributes to local revitalization. Moreover, the business contributes to a recycling-oriented agriculture in that it uses safe, secure compost and liquid fertilizer for agriculture.

Many advantages can be expected from the gasified biomass power-generation business. We expect further development in the future.

There are efforts to create an economy based on environmental conservation by setting natural energy at the core. The world anticipates this challenge that we must take up.
MHI divides its various products into eleven headquarters and divisions, and develops operation in individual headquarters and divisions. These headquarters and divisions are broadly classified into five segments (shipbuilding & ocean development, power systems, machinery & steel structures, aerospace, and mass and medium-lot manufactured machinery). On the other hand, we divide the business departments into four categories; “Power & Energy,” “Transportation & Security,” “Environment & Society,” and “Industries,” and aim for “MHI, a Premier Global Organization” contributing to the safe, fulfilling lives of the people worldwide.

Since we need to develop stable business overseas particularly from now, we will expand the authority, functions and workforces of the local offices to enhance local manufacturing bases.

Relationship between four business categories and each of the headquarters, divisions and segments

Sales by segment and by region

<table>
<thead>
<tr>
<th>Segment</th>
<th>Headquarters and Divisions</th>
<th>Power &amp; Energy</th>
<th>Environment &amp; Society</th>
<th>Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipbuilding &amp; Ocean Development</td>
<td>Shipbuilding &amp; Ocean Development Headquarters</td>
<td>Power Systems Headquarters, Nuclear Energy Systems Headquarters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery &amp; Steel Structures</td>
<td>Steel Structures &amp; Construction Headquarters, Machinery Headquarters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Systems</td>
<td>Power Systems Headquarters, Nuclear Energy Systems Headquarters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerospace</td>
<td>Aerospace Headquarters, General Machinery &amp; Special Vehicle Headquarters, Refrigeration Systems Headquarters, Industrial Machinery Division, Paper &amp; Printing Machinery Division, Machine Tool Division</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass and Medium-lot Manufactured Machinery</td>
<td>General Machinery &amp; Special Vehicle Headquarters, Refrigeration Systems Headquarters, Industrial Machinery Division, Paper &amp; Printing Machinery Division, Machine Tool Division</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sales amount by region in 2003 (Unit: 100 million yen)

<table>
<thead>
<tr>
<th>Region</th>
<th>Orders received</th>
<th>Net sales</th>
<th>Operating income (loss)</th>
<th>Net income (loss)</th>
<th>Total assets</th>
<th>Net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>Europe</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>North, Central, and South America</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>Russia</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>Japan</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>Oceania</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
<tr>
<td>Americas</td>
<td>2,001</td>
<td>14,808</td>
<td>-217</td>
<td>271</td>
<td>12,170</td>
<td>12,827</td>
</tr>
</tbody>
</table>

Business Outline

MHI divides its various products into eleven headquarters and divisions, and develops operation in individual headquarters and divisions. These headquarters and divisions are broadly classified into five segments (shipbuilding & ocean development, power systems, machinery & steel structures, aerospace, and mass and medium-lot manufactured machinery). On the other hand, we divide the business departments into four categories; “Power & Energy,” “Transportation & Security,” “Environment & Society,” and “Industries,” and aim for “MHI, a Premier Global Organization” contributing to the safe, fulfilling lives of the people worldwide. Since we need to develop stable business overseas particularly from now, we will expand the authority, functions and workforces of the local offices to enhance local manufacturing bases.

Statement of Accounts (Consolidated)

<table>
<thead>
<tr>
<th>Year</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders received</td>
<td>23,498</td>
<td>26,403</td>
<td>24,249</td>
<td>24,809</td>
<td>26,628</td>
</tr>
<tr>
<td>Net sales</td>
<td>28,750</td>
<td>30,450</td>
<td>28,639</td>
<td>25,938</td>
<td>23,734</td>
</tr>
<tr>
<td>Operating income (loss)</td>
<td>-237</td>
<td>748</td>
<td>786</td>
<td>1,153</td>
<td>666</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>-1,370</td>
<td>-203</td>
<td>264</td>
<td>343</td>
<td>217</td>
</tr>
<tr>
<td>Total assets</td>
<td>46,367</td>
<td>42,366</td>
<td>39,152</td>
<td>36,668</td>
<td>37,153</td>
</tr>
<tr>
<td>Net assets</td>
<td>12,450</td>
<td>12,782</td>
<td>12,827</td>
<td>12,709</td>
<td>13,244</td>
</tr>
</tbody>
</table>

Number of offices and employees by region

As of December, 2003

Sales by segment and by region

<table>
<thead>
<tr>
<th>Segment</th>
<th>Power Systems</th>
<th>Machinery &amp; Steel Structures</th>
<th>Aerospace</th>
<th>Power &amp; Energy</th>
<th>Environment &amp; Society</th>
<th>Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipbuilding &amp; Ocean Development Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel Structures &amp; Construction Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Systems Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear Energy Systems Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Machinery &amp; Special Vehicle Headquarters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Machinery Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper &amp; Printing Machinery Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine Tool Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales by industry segment in 2003 (Unit: 100 million yen)</th>
<th>721</th>
<th>2,001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipbuilding &amp; Ocean Development</td>
<td>6,676</td>
<td></td>
</tr>
<tr>
<td>Power Systems</td>
<td>9,902</td>
<td></td>
</tr>
<tr>
<td>Machinery &amp; Steel Structures</td>
<td>4,175</td>
<td></td>
</tr>
<tr>
<td>Aerospace</td>
<td>3,246</td>
<td></td>
</tr>
<tr>
<td>Environment &amp; Society</td>
<td>14,808</td>
<td></td>
</tr>
<tr>
<td>Industries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales amount by region in 2003 (Unit: 100 million yen)</th>
<th>2,107</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central &amp; South America</td>
<td>647</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>1,320</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>210</td>
<td></td>
</tr>
</tbody>
</table>
Corporate Governance

Approach to promoting fair and sound administration

MHI makes efforts to promote fair and sound management premised on the legal stance of the law. MHI is taking a number of initiatives to enhance management efficiency and strengthen compliance, including reforming the management system to allow more effective decision-making in response to radical changes in the economic environment. The Group is also working to make management more transparent by disclosing information rapidly and accurately to shareholders and other external stakeholders.

Creating a more efficient executive framework

In order to enhance management efficiency, all managing directors have been given the authority of representative directors. This devolution of authority is aimed at ensuring more effective, flexible management. Furthermore, discussions on important management decisions under consideration are held in meetings of the representative directors, resulting in a framework that leads to more appropriate management decisions and business execution.

Appointing outside directors and corporate auditors

For some time, MHI has sought to strengthen management oversight functions through the appointment of outside directors and corporate auditors. Currently, of the 28 directors, one is from outside MHI, while two of the four corporate auditors are external appointments. None of external directors or auditors has conflicts of interest with MHI.

Compliance System

We established the Compliance Committee, an organization directly controlled by the president in May 2001, to promote fair, faithful business activities, based on compliance. The committee is headed by the managing director in charge of compliance, and consists of corporate department heads as members. The committee develops various measures to promote compliance throughout the company.

Compliance Promotion Activities

To familiarize all staff with compliance activities, we have specifically developed the following activities:

- We provide all executives at the managerial level or above with the “Compliance Guideline for Managers,” and hold compliance seminars based on the guideline so that executives can instruct their subordinates in their sections.
- We have also introduced compliance education in training for each staff rank, such as training for newly appointed managers and for new employees every year. In addition, last year, we newly started compliance promotion training on a discussion basis, where the superior of each department trains the subordinate staff based on actual examples. We will continue this new training. The training is attended by all staff including board members, and it aims to enhance compliance by improving the awareness of individual staff as well as introducing an understanding of compliance.

Hotline System

We set up a hotline and a dedicated contact in the Compliance Committee Office in June 2001 so that inappropriate acts in terms of compliance can be uncovered as early as possible, and rectified through the initiative of the company itself. The office accepts letters and comments from employees, affiliated companies, and material suppliers.

Once they receive such letters and comments, the Compliance Committee immediately investigates the problem. If the Committee finds anything inappropriate, they will correct it. To protect informers, we give them special consideration so that they are not treated unfairly.

MHI Compliance Guideline

The guideline consists of three items: 1. business activities, 2. relationship between company and society, and 3. relationship between company and employees, and each item is regulated as the standard of behavior in implementing business activities.

For the self-declaration of individual employees, the guideline has a space for a signature. We request that employees keep the guideline at hand to check whether they are in accordance with laws and rules and whether they are fair and faithful when they act as our staff. By doing so, we let them cultivate awareness.

Relationship between company and society

We will conduct sensible company activities in compliance with laws and in an appropriate manner as well as contribute to society by providing safe, high-quality products and services.

1. We will make efforts to provide safe, high-quality products and services.
2. In conducting business activities, we will pursue fair and free intercorporate competition in compliance with the Antimonopoly Act, and Act against delay in payment of subcontract proceeds, etc. in order to maintain trust in the company.
3. We promote, through the Compliance Committee, an organization directly controlled by the president in May 2001, to promote fair, faithful business activities, based on compliance.
4. We will implement appropriate accounting and tax accounting in accordance with relevant laws, accounting standards, and internal regulations.
5. In relation to overseas business, we will follow laws related to import and export and local laws.
6. We will strive to improve the environment and live in harmony with society as a good corporate citizen.

1. We will observe environmental laws and regulations.
2. We will improve the environment by reducing waste and energy consumption.
3. We will observe occupational health and safety laws and regulations.

Relationship between company and employees

The company will secure a safe, healthy work environment, and company members shall make a clear distinction between public and private life, one of our management creeds. We have promoted business activities fairly and faithfully. As a more specific activity guideline, we established the “MHI Compliance Guideline” (referred to on Page52) in September 2001, and distributed the guideline to all board members and employees.

We are socially responsible for Ethical-Legal Compliance (hereinafter referred to as “compliance”), and work hard so that individual employees comply with laws and social rules, implement our business fairly and faithfully, we gain confidence from society, and develop soundly and sustainably.

Ethical-Legal Compliance

MHI Compliance Guideline

We base our activities on honesty, harmony, and a clear distinction between public and private life, one of our management creeds. We have promoted business activities fairly and faithfully. As a more specific activity guideline, we established the “MHI Compliance Guideline” (referred to on Page52) in September 2001, and distributed the guideline to all board members and employees.

We conduct sensible company activities in compliance with laws and in an appropriate manner as well as contribute to society by providing safe, high-quality products and services.

1. We will make efforts to provide safe, high-quality products and services.
2. In conducting business activities, we will pursue fair and free intercorporate competition in compliance with the Antimonopoly Act, and Act against delay in payment of subcontract proceeds, etc. in order to maintain trust in the company.
3. We promote, through the Compliance Committee, an organization directly controlled by the president in May 2001, to promote fair, faithful business activities, based on compliance.
4. We will implement appropriate accounting and tax accounting in accordance with relevant laws, accounting standards, and internal regulations.
5. In relation to overseas business, we will follow laws related to import and export and local laws.
6. We will strive to improve the environment and live in harmony with society as a good corporate citizen.
MHI Social and Environmental Report 2004

Management

Administrative Organization

Corporate Governance

Approach to promoting fair and sound administration
MHI makes efforts to promote fair and sound management premised on the legal stance of the law. MHI is taking a number of initiatives to enhance management efficiency and strengthen compliance, including reforming the management system to allow more effective decision-making in response to radical changes in the economic environment. The Group is also working to make management more transparent by disclosing information rapidly and accurately to shareholders and other external stakeholders.

Creating a more efficient executive framework
In order to enhance management efficiency, all managing directors have been given the authority of representative directors. This devolution of authority is aimed at ensuring more effective, flexible management. Furthermore, discussions on important management decisions under consideration are held in meetings of the representative directors, resulting in a framework that leads to more appropriate management decisions and business execution.

Appointing outside directors and corporate auditors
For some time, MHI has sought to strengthen management oversight functions through the appointment of outside directors and corporate auditors. Currently, of the 28 directors, one is from outside MHI, while two of the four corporate auditors are external appointees. None of external directors or auditors has conflicts of interest with MHI.

Ethical-Legal Compliance

We are socially responsible for Ethical-Legal Compliance (hereinafter referred to as “compliance”), and work hard so that individual employees comply with laws and social rules, implement our business fairly and faithfully, and develop society, and develop soundly and sustainability.

MHI Compliance Guideline

With the idea, “We base our activities on honesty, harmony, and a clear distinction between public and private life,” one of our management creeds, we have promoted business activities fairly and faithfully. As a more specific activity guideline, we established the “MHI Compliance Guideline” (referred to on page28) in September 2001, and distributed the guideline to all board members and employees.

The guideline consists of three items: I. business activities, II. relationship between company and society, and III. relationship between company and employees, and each item is regulated as the standard of behavior in implementing business activities. For the self-declaration of individual employees, the guideline has a space for a signature. We request that employees keep the guideline at hand to check whether they are in accordance with laws and rules and whether they are fair and faithful when they act as our staff. By doing so, we let them cultivate awareness.

Compliance System
We established the Compliance Committee, an organization directly controlled by the president in May 2001, to promote fair, faithful business activities, based on compliance. The committee is headed by the managing director in charge of compliance, and consists of corporate department heads as members. The committee develops various measures to promote compliance throughout the company.

Compliance Promotion Activities
To familiarize all staff with compliance activities, we have specifically developed the following activities:

We provide all executives at the managerial level or above with the “Compliance Guideline for Managers,” and hold compliance seminars based on the guideline so that executives can instruct their subordinates in their sections.

We have also introduced compliance education in training for each staff rank, such as training for newly appointed managers and for new employees every year. In addition, last year, we newly started compliance promotion training on a discussion basis, where the superior of each department trains the subordinate staff based on actual examples. We will continue this new training. The training is attended by all staff including board members, and it aims to enhance compliance by improving the awareness of individual staff as well as introducing an understanding of compliance.

Hotline System
We set up a hotline and a dedicated contact in the Compliance Committee Office in June 2001 so that inappropriate acts in terms of compliance can be uncovered as early as possible, and rectified through the initiative of the company itself. The office accepts letters and comments from employees, affiliated companies, and material suppliers. Once they receive such letters and comments, the Compliance Committee immediately investigates the problem. If the Committee finds anything inappropriate, they will correct it. To protect informers, we give them special consideration so that they are not treated unfavorably.

MHI Social and Environmental Report 2004

To date, the committee has received well over one hundred letters and calls, and the system has proven itself to work well to prevent problems and to help the company make its operations more compliance-oriented.

Other efforts
For overseas businesses, for example, relevant matters will be discussed by the Export-related Law Compliance Committee and then responded to so that we follow the appropriate laws and behave appropriately. In this way, we take a suitable approach to handling individual laws.

In spite of our approach, we were repeatedly punished by the government authorities in relation to the Construction Business Act last year. After this, we immediately set up the Construction Business Act Compliance Committee, promoting awareness of compliance to all staff, and we have discussed and promoted company-wide preventive measures.

In this way, we make efforts to further enhance compliance by improving and progressing compliance awareness and making appropriate responses to individual laws as important pillars of our activities.
Environmental Management System

MHI has contributed to society through manufacturing products since its foundation. MHI is working on two aspects; one is to decrease the burden on the environment involved in manufacturing its products, and the other is to develop technology that contributes to solving the problems of the environment and energy. In 1996, we established the Environment Committee to further contribute to society and for the harmonious coexistence of people and the natural environment. The environmental management system is constructed in accordance with the "Basic Policy on Environmental Matters" and the seven items of the "Conduct Guidelines" established by the company.

**Basic Policy on Environmental Matters**

In order to make the sustainable development of society possible, a basic policy on environmental matters has been established. Pursuant to the express provision of Section 1 of its creed that “We strongly believe that customers come first and that we are obligated to be an innovative partner to society,” MHI shall, as a matter of primary importance, strive, through its R&D, manufacturing and other business activities, to play a useful role in the development of society. To this end, while remaining aware that a business enterprise is a member of society, MHI shall endeavor, in all aspects of its business activities, to reduce the burden on the environment and shall concentrate and fully utilize technological capabilities for the development of technologies and products that will protect the environment, thus contributing to the establishment of a society in which sustainable development is possible.

**Conduct Guidelines**

In order to realize the basic policy, the following seven conduct guidelines have been set.

- Pursuant to the "Basic Policy on Environmental Matters," the environmental protection is a top priority in the company's operations, and the entire company is endeavoring to protect and improve the environment.
- MHI shall assign personnel and resources to the environment-related activities and shall endeavor to continuously improve and promote environmental protection activities by establishing environmental goals and targets.
- MHI shall endeavor to develop and provide advanced, highly reliable, unique technologies and products that contribute to solving environmental and energy problems.
- MHI shall, as a member of society, participate in local and national environmental laws and regulations, beyond mere compliance by existing, implementing, and evaluating statutory standards where necessary, and endeavor to continually improve and promote environmental protection activities by establishing environmental goals and targets.
- MHI shall endeavor to protect the environment by conserving energy, especially the necessary energy, and to provide environmental training and other programs to enhance environmental awareness of all company employees, and take steps to expand public relations activities, such as providing environment-related information to the public and social contribution activities.

**Environmental Management System**

We established the "Environmental Committee" in 1996 in order to clearly construct an approach to environmental protection. This committee plans and prepares the annual environmental policy of the entire company to determine the direction of its activities, and follows up the annual plan prepared by respective headquarter, divisional, and works on environmental protection. In addition, in accordance with company policy, each of our headquarters, divisions, and works prepares and promotes an action plan incorporating the characteristics of respective areas and the special features of production activities. The following organizations have been established to execute these activities:

- Environmental Protection Organization
- Environmental Management System
- Acquisition of ISO14001 Certification
- Conduct Guidelines
- Environmental Education
- Environmental Management System

**Environmental Protection Organization**

President

Executive Office

Deputy for Environment Activities

General Affairs Department

Research & Development Centers

Human Resources Activities

Headquarters/Division/Works Environment Committees

Environmental Conservation Liaison Conference

Energy Conservation Liaison Conference

Technical Headquarters

Technical Center

Executive Committee

Chair, Vice Chair, Secretary and Executive Member (Chairmen and Executive Members of the Environmental Conservation Liaison Conference, the Energy Conservation Liaison Conference, and Technical Headquarters)
Environmental Management System

MHI has contributed to society through manufacturing products since its foundation. MHI is working on two aspects; one is to decrease the burden on the environment involved in manufacturing its products, and the other is to develop technology that contributes to solving the problems of the environment and energy. In 1996, we established the Environment Committee to further contribute to society and for the harmonious coexistence of people and the natural environment. The environmental management system is constructed in accordance with the "Basic Policy on Environmental Matters" and the seven items of "the Conduct Guidelines" established by the company.

**Basic Policy on Environmental Matters**

- In order to make the sustainable development of society possible, a basic policy on environmental matters has been established.
- The company expresses its determination to make sustained development possible by practicing sustainability in the development, manufacture, and operation of its products.

**Conduct Guidelines**

- In order to realize the basic policy, the following seven conduct guidelines have been set.
  1. Recognize that environmental protection is an essential duty of the company.
  2. Regularly review and improve the ISO 14001 environmental management system.
  3. Regularly conduct environmental audits and strive to improve the effectiveness of the environmental management system.

**Environmental Protection Organization**

We established the "Executive Committee" in 1996 in order to clarify the annual environmental policy of the entire company. The executive committee is composed of the environmental managers of the company's headquarters, divisions, and works. It is responsible for reviewing the company's environmental activities and determining the company's environmental goals and targets.

**Acquisition of ISO14001 Certification**

Starting with the Yokohama Dockyard & Machinery Works, which obtained ISO14001 certification first among Japanese companies engaged in heavy industry, all 15 headquarters/divisions/works of MHI obtained ISO certification. Striving to continuously improve the environmental management system and operate the PLAN-DO-CHECK-ACTION (PDCA) cycle smoothly, we have been renewing ISO certification without fail.

**Compliance with Environmental Law**

In June 2003, in the Hiroshima Plant of our Machine Tool Division, the regular inspection of the waste water outlet of the plant by the Sewage Bureau of Hiroshima City found emission of 3.7 mg of dichloromethane, a substance designated as a specially controlled waste. The emission level exceeded the water quality standard value of 0.2 mg/l. Regarding this violation of the Sewage Law, we received a recommendation for improvement from Hiroshima City, and we submitted a "Water Quality Improvement Plan" and a "Water Quality Improvement Report" to Hiroshima City in August 2003.

**Environmental Education**

We regularly conduct the environmental education of all employees by devising from various levels from new employees to managers. In addition, there are newsletters for employees explaining the progress of the ISO14001 activities and terminology related to the environment. In the "Month of the Environment," we ensure that all employees are aware of the president's environmental policies by informing them about the effect that the works have on the environment and to deal with problems in an emergency.

**Introduction of the Environmental Management System**

Starting with the Yokohama Dockyard & Machinery Works, which obtained ISO14001 certification first among Japanese companies engaged in heavy industry, all 15 headquarters/divisions/works of MHI obtained ISO certification. Striving to continuously improve the environmental management system and operate the PLAN-DO-CHECK-ACTION (PDCA) cycle smoothly, we have been renewing ISO certification without fail.

As a result of these efforts, the burden on the environment of our production sites is decreasing significantly every year, and our team members from external organizations are rarely left unsatisfied.

Our affiliated companies are introducing an environmental management system, with domestic companies targeting completion by March 2005 and overseas companies by March 2006.

**Environmental Management System**

We established the "Executive Committee" in 1996 in order to clarify the annual environmental policy of the entire company. The executive committee is composed of the environmental managers of the company's headquarters, divisions, and works. It is responsible for reviewing the company's environmental activities and determining the company's environmental goals and targets.

**Conduct Guidelines**

- In order to realize the basic policy, the following seven conduct guidelines have been set.
  1. Recognize that environmental protection is an essential duty of the company.
  2. Regularly review and improve the ISO 14001 environmental management system.
  3. Regularly conduct environmental audits and strive to improve the effectiveness of the environmental management system.

**Environmental Protection Organization**

We established the "Executive Committee" in 1996 in order to clarify the annual environmental policy of the entire company. The executive committee is composed of the environmental managers of the company's headquarters, divisions, and works. It is responsible for reviewing the company's environmental activities and determining the company's environmental goals and targets.

**Acquisition of ISO14001 Certification**

Starting with the Yokohama Dockyard & Machinery Works, which obtained ISO14001 certification first among Japanese companies engaged in heavy industry, all 15 headquarters/divisions/works of MHI obtained ISO certification. Striving to continuously improve the environmental management system and operate the PLAN-DO-CHECK-ACTION (PDCA) cycle smoothly, we have been renewing ISO certification without fail.

As a result of these efforts, the burden on the environment of our production sites is decreasing significantly every year, and our team members from external organizations are rarely left unsatisfied.

Our affiliated companies are introducing an environmental management system, with domestic companies targeting completion by March 2005 and overseas companies by March 2006.

**Compliance with Environmental Law**

In June 2003, in the Hiroshima Plant of our Machine Tool Division, the regular inspection of the waste water outlet of the plant by the Sewage Bureau of Hiroshima City found emission of 3.7 mg of dichloromethane, a substance designated as a specially controlled waste. The emission level exceeded the water quality standard value of 0.2 mg/l. Regarding this violation of the Sewage Law, we received a recommendation for improvement from Hiroshima City, and we submitted a "Water Quality Improvement Plan" and a "Water Quality Improvement Report" to Hiroshima City in August 2003.

We ensured that the people of the respective works and affiliated companies were aware of this, and we conducted surveys and confirmations emphasizing the control of chemical substances, procedures for damage disposal, and observation of these procedures, etc., to prevent any recurrence of the problem.

**Environmental Education**

We regularly conduct the environmental education of all employees by devising from various levels from new employees to managers. In addition, there are newsletters for employees explaining the progress of the ISO14001 activities and terminology related to the environment. In the "Month of the Environment," we ensure that all employees are aware of the president's environmental policies by informing them about the effect that the works have on the environment and to deal with problems in an emergency.
### Mid- and Long-Term Objectives and Progress in 2003

We have decided on five items for reducing the environmental burden, i.e., reduction of waste, restraint of chemical substances, energy saving, countermeasures against fluorocarbons and environmental management, and have set up “Mid- and Long-Term Objectives” to be achieved between Year 2005 and Year 2010 (see the attached table).

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Medium- and Long-term Objective</th>
<th>Progress in 2003</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste reduction</td>
<td>Controlling generation and emission of waste materials</td>
<td>Limiting the total amount of waste materials in 2010 to 170,000 tons, a minimum 20% cut compared with the amount in 1992 by promoting resource savings and controlling material purchases</td>
<td>The total emission amount of waste materials is 144,000 tons, a reduction of 33.3% compared to the total emission amount in base year 1990 (216,000 tons)</td>
<td>Exceeded the target of 20% reduction</td>
</tr>
<tr>
<td></td>
<td>Reducing waste land reclamation and landfill</td>
<td>Zero waste land reclamation and landfill to be achieved by more than half of the Works by 2005, and by all the Works by 2010, through promotion of reuse and recycle</td>
<td>Two works (Hyakusha Dockyard &amp; Machinery Works and Takeaga Machinery Works) achieved zero emission. One headquarters and two locations (General Machinery &amp; Special Works Headquarters, the Paper &amp; Printing Machinery Division, and the Machine Tool Division) are working on zero emission. “The Company wide Zero Emission Sub-committee” began and is a parting zero emission activities.</td>
<td>Two works already achieved the target, and those other works are working to achieve the target. A total of five works will achieve the target by 2005.</td>
</tr>
<tr>
<td>Control of chemical substances</td>
<td>Total phase of equipment using PCB</td>
<td>Disuse of ballasts for lighting fixture and high voltage equipment using PCB by 2010</td>
<td>Promoting the plan for the complete disuse of equipment using PCBs by 2010</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td></td>
<td>Reducing emission of organic chlorine chemical substances</td>
<td>By thoroughly controlling organic chlorine chemical substances and their emissions, atmosphere releases of dichloromethane, trichloroethylene, and tetrachloroethylene to be reduced by 95% by 2005, and by 100% by 2010, with 1996 levels</td>
<td>The total emission amount of organic chlorine chemical substances is 14.2 tons. A reduction of 94.6% compared to base year 1996 (262.2 tons)</td>
<td>Progressing close to plan</td>
</tr>
<tr>
<td>Energy conservation</td>
<td>Reducing CO2 emission</td>
<td>Reduction of CO2 emission by 6% by 2010, compared with the 1990 level, through strict control of CO2 emission at production plants. Introduction of solar power generating systems by 2005</td>
<td>The total amount of CO2 emission is 492,000 tons, an increase of 4.2% compared to base year 1990 (472,000 tons).</td>
<td>In the first half term, a 1.2% reduction was achieved, but situation worsened in the second half term due to an increase in the use of energy. Strengthening energy-saving activities is necessary.</td>
</tr>
<tr>
<td>Countermeasures against fluorocarbons*</td>
<td>Reducing use of fluorocarbons</td>
<td>Switching from HCFC that can destroy the ozone layer to HFC whose ozone destruction factor is zero, by 2010</td>
<td>The All-Conditioning &amp; Refrigeration Systems Headquarters is promoting the reduction in HCFC emission. The Nagoya Guidance &amp; Propulsion Systems Works is changing its cleaning method. The Paper &amp; Printing Machinery Division, Nagakura (Paper &amp; Printing Machinery Works) and Yokohama Dockyard &amp; Machinery Works are promoting the replacement of equipment that uses HFCs.</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td>Environment</td>
<td>Environmental management system</td>
<td>Continuation of renewal of ISO14001 certification for the Works in Japan</td>
<td>All domestic production sites (15 works, headquarters and divisions) have obtained ISO14001 certification, and are continuing procedures for renewal.</td>
<td>Progressing as planned. Acquisition of certification by affiliated companies will be expedited.</td>
</tr>
<tr>
<td>oriented business management</td>
<td>Database system for environmental-based corporate management</td>
<td>Developing a database system for the data of environmental burden by 2005</td>
<td>Started preparation for the creation of database including aggregation of the PRTR system.</td>
<td>Proceeding further with the work</td>
</tr>
<tr>
<td></td>
<td>Promoting environmental accounting</td>
<td>Continua work on environmental accounting, and completing the on-line summary system by 2005</td>
<td>Aggregation of environmental accounting results in April, made public in the 2003 Environmental Report.</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td></td>
<td>Issuing Environmental Reports</td>
<td>Further-upgrading the contents for the following issues</td>
<td>The 2003 edition (Japanese language version) was issued on June 26.</td>
<td>Issued as planned</td>
</tr>
<tr>
<td></td>
<td>Purchase of environmentally friendly products</td>
<td>Encouraging the purchase of environmentally friendly goods based on the house guideline for purchasing “Green goods.”</td>
<td>Green purchasing utilizing the Internet has been developed company-wide.</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td></td>
<td>Advancing environmental-conforming designs</td>
<td>Setting up and promoting working groups for designs conforming to environmental requirements</td>
<td>Study on the mechanism and standards to continuously create environment-friendly products</td>
<td>More specific development based upon the standards will be promoted.</td>
</tr>
</tbody>
</table>

*Fluorocarbons: Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs) and Hydrofluorocarbons (HFCs)

---

**Katsuhiro Yasuda**

General Manager of General Affairs Department

Among major shipbuilding and heavy machinery manufacturing companies in Japan, we first publicized in 2002 our mid- and long-term objectives for environmental protection to be achieved between 2005 and 2010, based on the basic policy and the conduct guidelines established in 1996. Our headquarters and works are playing a central role in promoting various activities to achieve the objectives. The progress of these activities is monitored and evaluated by the regular Environmental Committee, and mid- and long-term objectives are comparatively reviewed.

We will exceed the waste materials reduction target, but to restrain the emission of chemical substances and to save more energy (restraint of CO2 emission), greater efforts are required to achieve the target. In particular, concerning restraint of CO2 emission, our efforts should not be limited to controlling CO2 emission entailed in our own business activities. For example, we have been conducting R&D for a system in which CO2 is retained deep in the ground or under the sea after recovery. By utilizing our technology for environmental protection, we can contribute to reducing the environmental burden on society as a whole.

Sure and steady implementation to achieve the mid- and long-term objectives based upon the basic policy on environmental matters and the development of company-wide activities to create environment-friendly products compose a core to improve the environmental management of the company. At the same time, it meets the requirements of society. To contribute to the preservation of global warming and the realization of a recycling-based society, we will positively promote our mid- and long-term activities to reduce the environmental burden and contribute to the realization of a sustainable society.
Mid- and Long-Term Objectives and Progress in 2003

We have decided on five items for reducing the environmental burden, i.e., reduction of waste, restraint of chemical substances, energy saving, countermeasures against fluorocarbons and environmental management, and have set up “Mid- and Long-Term Objectives” to be achieved between Year 2005 and Year 2010 (see the attached table).

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>Mid- and Long-term Objective</th>
<th>Progress in 2003</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste reduction</td>
<td>Controlling generation and emission of waste materials</td>
<td>Limiting the total amount of waste materials in 2010 to 170,000 tons, a minimum 20% cut compared with the amount in 1992 by promoting resource savings and controlling material purchases</td>
<td>The total emission amount of waste materials is 144,000 tons, a reduction of 33.3% compared to the total emission amount in base year 1992 (216,000 tons)</td>
<td>Exceeded the target of 20% reduction</td>
</tr>
<tr>
<td></td>
<td>Reducing waste land-reclamation and landfill</td>
<td>Zero waste land-reclamation and landfill to be achieved by more than half of the Works by 2005, and by all the Works by 2010, through promotion of reuse and recycle</td>
<td>Two works (Yokohama Dockyard &amp; Machinery Works and Takasago Machinery Works) achieved zero emission. One headquarters and two divisions (General Machinery &amp; Special Vehicle Headquarters, the Paper &amp; Printing Machinery Division, and the Machine Tool Division) are working on zero emission. The “Company-wide Zero Emission Sub-committee” began and is preparing these zero emission activities.</td>
<td>Two works already achieved the target, and those other works are working to achieve the target. A total of five works will achieve the target by 2005.</td>
</tr>
<tr>
<td>Control of chemical substances</td>
<td>Total phase out using PCBs</td>
<td>Disuse of ballast for lighting fixture and high voltage equipment using PCBs by 2010</td>
<td>Promoting the plan for the complete disuse of equipment using PCBs by 2010</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td></td>
<td>Reducing emission of organic chlorochemical substances</td>
<td>By thoroughly controlling organic chlorochemical substances and their emissions, atmosphere releases of dichloromethane, trichloroethylene, and tetrachloroethylene to be reduced by 95% by 2005, and by 100% compared to 1996 levels</td>
<td>The total emission amount of organic chlorochemical substances is 14.2 tons, a reduction of 94.6% compared to base year 1996 (262.2 tons)</td>
<td>Progressing close to plan</td>
</tr>
<tr>
<td>Energy conservation</td>
<td>Reducing CO₂ emission</td>
<td>Reduction of CO₂ emission by 6% by 2010, compared with the 1990 level, through strict control of CO₂ emission at production plants. Introduction of solar power generating systems by 2005</td>
<td>The total amount of CO₂ emission is 492,000 tons, an increase of 4.2% compared to base year 1990 (472,000 tons).</td>
<td>In the first half term, a 1.2% reduction was achieved, but situation worsened in the second half-term due to an increase in the use of energy. Strengthening energy-saving activities is necessary.</td>
</tr>
<tr>
<td>Countermeasures against fluorocarbons*</td>
<td>Reducing use of fluorocarbons</td>
<td>Switching from HCFC that can destroy the ozone layer to HFC whose ozone destruction factor is zero, by 2010</td>
<td>The Air-Conditioning &amp; Refrigeration Systems Headquarters is promoting the reduction in HCFC emission. The Nagoya Guidance &amp; Propulsion Systems Works is changing its cleaning method. The Paper &amp; Printing Machinery Division, Nagasaki (Biplant &amp; Machinery Works) and Yokohama Dockyard &amp; Machinery Works are promoting the replacement of equipment that uses HCFCs.</td>
<td>Progressing as planned. Change of cleaning method will be expedited.</td>
</tr>
<tr>
<td>Environmental oriented business management</td>
<td>Environmental management system</td>
<td>Continuation of renewal of ISO14001 certification for the Works in Japan</td>
<td>All domestic production sites (15 works, headquarters and divisions) have obtained ISO14001 certification, and are continuing procedures for renewal.</td>
<td>Progressing as planned. Acquisition of certification by affiliated companies will be expedited.</td>
</tr>
<tr>
<td></td>
<td>Database system for environmental-based corporate management</td>
<td>Developing a database system for the data of environmental burden by 2005</td>
<td>Started preparation for the creation of database including aggregation of the PRTR system.</td>
<td>Proceeding further with the work</td>
</tr>
<tr>
<td></td>
<td>Promoting environmental accounting</td>
<td>Continues work on environmental accounting, and completing the on-line summary system by 2005</td>
<td>Aggregation of environmental accounting results in April made public in the 2003 Environmental Report.</td>
<td>Issued as planned</td>
</tr>
<tr>
<td></td>
<td>Issuing Environmental Reports</td>
<td>Further upgrading of the contents for the following issues</td>
<td>The 2003 edition (Japanese language version) was issued on June 26.</td>
<td>Issued as planned</td>
</tr>
<tr>
<td></td>
<td>Purchase of environmentally friendly products</td>
<td>Encouraging the purchase of environmentally friendly goods based on the house guideline for purchasing “Green goods.”</td>
<td>Green purchasing utilizing the Internet has been developed company-wide.</td>
<td>Progressing as planned</td>
</tr>
<tr>
<td></td>
<td>Advancing environmental-conforming designs</td>
<td>Setting up and promoting working groups for designs conforming to environmental requirements</td>
<td>Study on the mechanism and standards to continuously create environment-friendly products</td>
<td>More specific development based upon the standards will be promoted.</td>
</tr>
</tbody>
</table>

*Fluorocarbons: Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs) and Hydrofluorocarbons (HFCs)

**Among major shipbuilding and heavy machinery manufacturing companies in Japan, we first publicized in 2002 our mid- and long-term objectives for environmental protection to be achieved between 2005 and 2010, based on the basic policy and the conduct guidelines established in 1996. Our headquarters and works are playing a central role in promoting various activities to achieve the objectives. The progress of these activities is monitored and evaluated by the regular Environmental Management Committee, and mid- and long-term objectives are comprehensively reviewed. We will exceed the waste materials reduction target, but to restrain the emission of chemical substances and to save more energy (reduction of CO₂ emission), greater efforts are required to achieve the target. In particular, concerning restraint of CO₂ emission, our efforts should not be limited to controlling CO₂ emission entailed in our own business activities. For example, we have been conducting R&D for a system in which CO₂ is retained deep in the ground or under the sea after recovery. By utilizing our technology for environmental protection, we can contribute to reducing the environmental burden on society as a whole. Sun and steadily implementation to achieve the mid- and long-term objectives based upon the “Basic Policy on Environmental Matters” and the development of company-wide activities to create environment-friendly products compose a core to improve the environmental management of the company. At the same time, it meets the requirements of society. To contribute to the prevention of global warming and the realization of a recycling-based society, we will positively promote our mid- and long-term activities to reduce the environmental burden and contribute to the realization of a sustainable society.**
Environmental Accounting

Effect of Environmental Protection and Its Economic Effect

In order to comprehend investment and expense for environmental protection and its results, we have established our own “Guidelines for Environmental Accounting” incorporating concrete examples with reference to the “Guidebook for Environmental Accounting (2002 edition)” of the Ministry of the Environment and have continued to quantitatively measure these matters since 2001.

In addition, we began this year a trial calculation of the economic effect on customers when they use our products.

Cost of Environmental Protection

Both amount of investment and expenses in 2003 increased compared to 2002. The total amount of investment was 3.7 billion yen, in which the amount of investment related to the production areas increased. The total expenses amounted to 14.5 billion yen, in which expenses for research and development (R&D) related to the environment increased, comprising 10% of the total amount.

Effect of Environmental Protection and Its Economic Effect

As a result of environmental protection activities such as recycling and energy saving, there was an economic effect of about 2.1 billion yen.

In addition, as shown in the table below, we generated various environmental protection effects as qualitative elements that are difficult to calculate in terms of money.

<table>
<thead>
<tr>
<th>Environmental Protection Effects</th>
<th>Monetary Effect</th>
<th>Non-Monetary Effect</th>
</tr>
</thead>
</table>
| Prevention of Outflow of Oils/Fats and Chemical Substances | Waste treatment cost reduction due to recycling | From 2003, we started to make trial calculations of the economic effect on customers when they use our products.

Environmental Accounting / Overall Picture of the Effect on the Environment by Our Business Operations

Overall Picture of the Effect on the Environment by Our Business Operations

In the process of production, we use various resources. Realizing that it is important to be aware of the effect on the environment in all our operations, we strive to identify the amount of resources used such as energy and water as well as the amount of resulting waste at our headquarters, works and divisions.

Furthermore, we will contribute to the preservation of the environment of society as a whole by decreasing the burdens on the environment when our products are used.

Input and Output

Input

- Total Energy Input
- Electricity
- Grade A crude oil
- Grade C crude oil
- City gas
- Light oil
- Kerosene
- LPG
- Other

Output

- CO₂
- Chemical substances
  - NOx
  - SOx
- Wastewater
- Waste materials

Products

Nuclear Power Generation

Nuclear power is generated by nuclear fission and combustion and not required for the generation of power from thermal. CO₂ is emitted during the power generation process. Nuclear power generation significantly contributes to reducing CO₂ emissions.

From 2003, we started to make trial calculations of the economic effect on customers when they use our products, based upon reduction in the CO₂ amount.

<table>
<thead>
<tr>
<th>Products</th>
<th>Decreasing Effect on the Environmental Burden When Our Products Are Used (examples)</th>
</tr>
</thead>
</table>
| Nuclear Power Generation | Decreasing CO₂ emission amount by nuclear power generation and the average CO₂ emission amount¹/² by power generation of the Japanese electric power companies.
| Five Gas Desulphurization (DSOx) and Desulphination (DeMOx) System | The systems suppress the emission of SOx and NOx, and are utilized in implementing countermeasures against acid rain.
| Power Generation Gas Engine Co-generation Systems | Power generation gas engines, which is co-generation of the electric power and thermal power generation of the Japanese electric power companies, was developed in 2003 by nuclear power plants built by MHI.

Note: *1 CO₂ emission amount of 0.23 kg-CO₂/kWh for the amount of electricity used is the actual fiscal 2003 result reported by the Federation of Electric Power Companies of Japan.

Table 3.11 Environmental Protection Investment and Expense

<table>
<thead>
<tr>
<th>Year</th>
<th>Environmental Protection Investment</th>
<th>Environmental Protection Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>10,000,000 yen</td>
<td>10,000,000 yen</td>
</tr>
<tr>
<td>2002</td>
<td>11,000,000 yen</td>
<td>11,000,000 yen</td>
</tr>
<tr>
<td>2003</td>
<td>12,000,000 yen</td>
<td>12,000,000 yen</td>
</tr>
</tbody>
</table>

Note: *1 Investment in plants and equipment in 2003 was 69.3 billion yen. Of this, investment in plants and equipment related to the environment was 3.7 billion yen (5.3%). In addition, as shown in the table below, we generated various environmental protection effects as qualitative elements that are difficult to calculate in terms of money.

Table 3.12 Environmental Protection Investment and Expense

<table>
<thead>
<tr>
<th>Year</th>
<th>Environmental Protection Investment</th>
<th>Environmental Protection Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>10,000,000 yen</td>
<td>10,000,000 yen</td>
</tr>
<tr>
<td>2002</td>
<td>11,000,000 yen</td>
<td>11,000,000 yen</td>
</tr>
<tr>
<td>2003</td>
<td>12,000,000 yen</td>
<td>12,000,000 yen</td>
</tr>
</tbody>
</table>

Note: *1 Investment in plants and equipment in 2003 was 69.3 billion yen. Of this, investment in plants and equipment related to the environment was 3.7 billion yen (5.3%). In addition, as shown in the table below, we generated various environmental protection effects as qualitative elements that are difficult to calculate in terms of money.
Environmental Accounting

In order to comprehend investment and expense for environmental protection and its results, we have established our own "Guidelines for Environmental Accounting." Incorporating concrete examples with reference to the "Guide Book for Environmental Accounting (2002 edition)" of the Ministry of the Environment and have continued to quantitatively measure these matters since 2001.

In addition, we began this year a trial calculation of the economic effect on customers when they use our products.

Cost of Environmental Protection

Both amount of investment and expenses in 2003 increased compared to 2002. The total amount of investment was 3.7 billion yen, in which the amount of investment related to the production areas increased. The total expenses amounted to 14.5 billion yen, in which expenses for research and development (R&D) related to the environment increased, comprising 70% of the total amount.

Environmental Accounting / Overall Picture of the Effect on the Environment by Our Business Operations

In the process of production, we use various resources. Reading that it is important to be aware of the effect on the environment in all our operations, we strive to identify the amount of resources used such as energy and water as well as the amount of resulting waste at our headquarters, works and divisions. Furthermore, we will contribute to the preservation of the environment of society as a whole by decreasing the burdens on the environment when our products are used.

Overall Picture of the Effect on the Environment by Our Business Operations

### Input and Output

#### Input

- **Total Energy Input**
  - 10,420,716,745 MJ
  - Electricity: 713,342 MWh
  - Gas: 54,270,040 MJ
  - Fuel oil: 2,892,400 MJ
  - Light oil: 1,530 MWh
  - LP gas: 2,028 MWh
  - Coal gas: 1,560 MWh
  - Other: 52,564 MWh
- **Water**
  - 12.28 Mton
- **Resources**
  - Iron, plastics, paper and other

#### Output

- **CO2**
  - 492 thousand tons
- **NOx**
  - 2,254 tons
- **SOx**
  - 214 tons
- **Wastewater**
  - 10.21 million tons
- **Waste materials**
  - 144 thousand tons

### Details of the Effort

#### Prevention of Outdoor Air/Fate and Chemical Substances

- Making our PCB Waste Harmless
- Reduction in Emission of Water/Air Pollutants
- Development of Various Types of Environment-conscious Products

#### Management Activities

- Overall Picture of the Effect on the Environment by Our Business Operations
- Environment Accounting

### Product Efficiency

#### Decreasing Effect on the Environmental Burden When Our Products Are Used (Examples)

- **Nuclear Power Generation**
  - Nuclear power generation is generated by nuclear fission and combustion and not required for the generation of power on Thermo. CO2 is not emitted during the power generation process. Nuclear power generation significantly contributes to reducting CO2 emissions.
  - Comparative Between the CO2 Emission Amount to Nuclear Power Generation and the Average CO2 Emission Amount
  - Competitive Between the CO2 Emission Amount to Nuclear Power Generation and the Average CO2 Emission Amount

- **Gas Desulfurization (DGS) and Denitrogen (DEnN) System**
  - These systems reduce the emission of SOx and NOx, and are utilized in implementing countermeasures against acid rain.
  - Comparative Between the CO2 Emission Amount to Nuclear Power Generation and the Average CO2 Emission Amount
  - Competitive Between the CO2 Emission Amount to Nuclear Power Generation and the Average CO2 Emission Amount

- **Power Generation Gas Engine Co-generation System**
  - The system contributes to energy co-generation and reduction of CO2 emissions with the world's highest total conversion efficiency.

#### Nuclear Power Generation

- **Nuclear Power Plants**
  - MOX Power Plants
  - Enhanced MOX Power Plants
  - Light Water Power Plants

- **Electricity**
  - Enhanced MOX Power Plants
  - Light Water Power Plants

- **Gas Engines**
  - High-Performance Gas Engines
  - Mid-Performance Gas Engines

- **Hydrogen/Inert Gas Cylinders
  - Enhanced Cylinders
  - Space Cylinders

### Comparison of CO2 Emission Amount

- CO2 emission amount to nuclear power generation is generated by nuclear fission and combustion and not required for the generation of power on Thermo. CO2 is not emitted during the power generation process.
- Competitive between the CO2 emission amount to nuclear power generation and the average CO2 emission amount.
- Competitive between the CO2 emission amount to nuclear power generation and the average CO2 emission amount.

### Environmental Accounting

- In 2003, we started to make trial calculations of the economic effect on customers when they use our products. Based upon reduction in the CO2 amount.
- We utilized the pro-forma calculation value of 9,450 yen/t-CO2 of the Ministry of the Environment for the calculation of the monetary amount. In addition, as shown in the table below, we generated various environmental protection effects as qualitative elements that are difficult to calculate in terms of money.

### Table: Details of the Effort

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research &amp; Development</td>
<td>Costs for public provision; global environmental protection; resource recycling, etc.</td>
<td>17,030</td>
<td>39,590</td>
<td>50,700</td>
<td>Based upon reduction in CO2 amount.</td>
</tr>
<tr>
<td>Management Activities</td>
<td>Costs for environmental protection, costs for research and development</td>
<td>1</td>
<td>11</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Management Activities</td>
<td>Costs of research and development of environmental products, etc.</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Management Activities</td>
<td>Costs of development and evaluation, information and placing such site, etc.</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Management Activities</td>
<td>Costs of waste materials used for underground and surface pollution, etc.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25,124</td>
<td>34,115</td>
<td>47,145</td>
<td></td>
</tr>
</tbody>
</table>

### Note

- Items included in the table are limited to those that can be quantitatively calculated.
- Other environmental protection effects, which are difficult to quantify, have not been included in the calculation.
Countermeasures Against Global Warming

Concerning greenhouse gases that cause global warming, we make efforts to reduce CO₂ gas emission. At production sites, we are promoting improvement in the efficiency of heat utilization by introducing co-generation system and reducing the electricity used for production by introducing energy-saving equipment. In research and development, too, in addition to improving the energy-saving features of our products, we are striving to reduce the amount of CO₂ emission from our customers using our products by offering co-generation systems, CO₂ recovery technology, and so on.

Resources Conservation and Waste Management

MHI is consistently working to reduce the amount of resources used, to reuse resources and to reduce waste materials. We are proceeding with effective utilization of water for restricting the use of groundwater, to prevent ground subsidence. We work almost only with recycled paper and also we try to use the reverse side of sheets as much as possible. In MHI, the ratio of recycling is increasing and the generation of waste materials is decreasing year by year. The Yokohama Dockyard & Machinery Works, has already achieved “zero emission” (means zero waste collection and landfill) (play a leading role in this field.

CO₂ Emission

In spite of promoting energy-saving activities in our respective works, the CO₂ emission in 2003 increased by 4.2% compared to base year 1990. The primary reason for this increase is the increase of the use of fuel for trial runs and for other operations involved in the construction of large cruise ships (Diamond Princess and Sapphire Princess) in Nagasaki Shipyard & Machinery Works. We will further continue our efforts to reduce emission to achieve the target set in 2010.

Greenhouse Gases

Chlorodifluoromethane (HCFC-22) and 1,1-dichloro-1-fluoroethane (HCFC-141b) are said to be greenhouse gases that cause global warming as well as substances that destroy the ozone layer. We use these substances for cleaning equipment. However, compared with 2002, we reduced the emission amount of HCFC-22 by 2.7 tons, a reduction of 2.4 tons, and reduced that of HCFC-141b to 21.9 tons, a reduction of 10.7 tons.

Towards the total abolition of the use of these substances by 2010 as stipulated in our mid- and long-term objectives, we will further endeavor to reduce use by promoting replacement of these substances and by other means.

Utilization of Solar Power Generation and Monitoring Its Performance

In the head office building, a total of 426 sets (20 kW) of MHI’s amorphous-type solar cell modules have been installed in the windows of the entrance hall on the 2nd floor of the head office building. Solar cell modules have been installed in the respective works, and the power generation performances are displayed on the monitor in the Show-room on the 2nd floor of the head office building.

Resources

The amount of water used is gradually decreasing. We succeeded in reducing the amount of water used by about 6% in 2003 compared to the previous year. In addition, we reduced the amount of discharged water by 4% compared to the previous year. The amount of recycled water used increased because our recycled water was required to be treated because of legal requirements.

Amount of Recycled Water

In 2003, the number of sheets of paper used did not change much, but the use of paper per person increased. As a result, the weight of paper used increased considerably. We will further strive to use the reverse side of sheets, use foam paper, etc.

Waste Materials

Since 2003, oil (waste oil of casting, etc.) which is reused as a recycling resource in the works, has not been regarded as a waste material. Therefore, the amount of waste material generated was considerably lower in 2003 compared with previous years. Since 2003 had been a large year in terms of weight, the ratio of the amount of waste material charge transformed to the target was 30% compared to 1992. The target for 2010 was achieved in advance.

Transition of the Amount of Water Used and Water Discharged

In 2003, the number of sheets of paper used did not change much, but the use of paper per person increased. As a result, the weight of paper used increased considerably. We will further strive to use the reverse side of sheets, use foam paper, etc.

Transition of the Amount of Waste Materials Generated

Amount of Paper Used

In 2003, the number of sheets of paper used did not change much, but the use of paper per person increased. As a result, the weight of paper used increased considerably. We will further strive to use the reverse side of sheets, use foam paper, etc.

Transition of the Recycling Ratio

Generation Status of Waste Materials by Type

We secured the cooperation of local enterprises and achieved “zero emission.” In the Takasago Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions. In the Takasaki Machinery Works, in February 2002, we declared our “zero emission” intentions.
Countermeasures Against Global Warming

Concerning greenhouse gases that cause global warming, we make efforts to reduce CO2 gas emission. At production sites, we are promoting improvement in the efficiency of heat utilization by introducing co-generation systems and reducing the electricity used for production by introducing energy-saving equipment. In research and development, too, in addition to improving the energy-saving features of our products, we are striving to reduce the amount of CO2 emission from our customers using our products by offering co-generation systems, CO2-recovery technology, and so on.

Resources Conservation and Waste Management

While consistently working to reduce the amount of resources used, to reuse resources and to reduce waste materials, we are proceeding with effective utilization of water forrestoring the use of groundwater, to prevent ground subsidence. We work almost only with recycled paper and also try to use the reverse side of sheets as much as possible. In MHI, the ratio of recycling is increasing and the generation of waste materials is decreasing year by year. The Yokohama Dockyard & Machinery Works, Takanagai Machinery Works, which have already achieved “zero-emission” (zero waste beselementation and landfill), play a leading role in this field.

CO2 Emission

In spite of promoting energy-saving activities in our respective works, the CO2 emission in 2003 increased by 4.2% compared to base year 1990. The primary reason for this increase is the increase of the use of fuel for trial runs and for other operations involved in the construction of large cruise ships (Diamond Princess and Sapphire Princess) in Nagasaki Shipyard & Machinery Works.

We will further continue our efforts to reduce emission to achieve the target set in 2010.

Greenhouse Gases

Chlorofluorocarbon (CFC) and 1,1-dichloro-1,2-fluorocarbon (HCFC-141b) are said to be greenhouse gases that cause global warming as well as substances for cleaning equipment. However, compared with 2002, we reduced the emission amount of CFC-12 by 27.1%, a reduction of 2.4 tons, and reduced that of HCFC-141b to 21.8 tons, a reduction of 10.7 tons.

Towards the total abolition of the use of those substances by 2010 as established in our mid- and long-term objectives, we will further endeavor to reduce use by promoting replacement of those substances and by other means.

Transition of HCFC Emission Amount

Utilization of Solar Power

In the head office building, a total of 426 sets (225 kW) of MH1-a photovoltaic type solar cell modules have been installed in the walls of the entrance hall on the 2nd floor of the head office building.

In 2003, the Kobe Shipyard & Machinery Works emphasized energy conservation. First of all, electricity loss during distribution was reduced by adopting the high-efficiency transformer when renewing the electric power receiving and transformation facility. As a result, 180,000 kWh of electric power was saved in one year. Furthermore, we analyzed equipment operators and found that some items were useless. We changed the lighting of the office floor from three lights to two, stopped operation of the ventilation fan in the building at night, and effectively used the heat change tank. As a result of these measures, we can save 1,820,000 kWh of electric power in one year.

In the compound of the works where we handle a wide range of products, it is not easy to perform detailed control and analysis. However, we will further make proposals for the effective use of energy leading to a reduction in cost and rising our customers' happiness.

Resources

The amount of water used is gradually decreasing. We succeeded in reducing the amount of water used by about 6% in 2003 compared to the previous year. In addition, we reduced the amount of discharged water by about 4% compared to the previous year. The amount of recycled water used increased because the recycled water was reused to working the rooms due to the cost saving.

Transition of the Amount of Water Used and Water Discharged

In 2003, the number of sheets of paper used did not change much, but the use of thick paper per person increased. As a result, the weight of paper used increased considerably. We will further strive to use the reverse side of sheets, use thin paper, etc.

Comment of the Person in Charge

Fukashi Okawa

A 2.1% reduction in electricity loss has been achieved through careful and detailed management.

Comment of the Person in Charge

Atsuro Yokota

We secured the cooperation of local enterprises and achieved “zero emission.”

In the Takanagai Machinery Works, in February 2003, we decided that we would strive to achieve the objective of “zero emission.”

In conversation with a representative from a candidate enterprise, we came up with the idea of recovering metal from scrapped steel plate and sand in the plant, in which various new materials are used by combining advanced recycling type engines with the magnetic selector.

We established various methods of recovering resources from waste materials by altering the method of disposal, and achieved a recycling ratio of 99% in March 2004. Through this achievement of zero emission, we believe we have strengthened our partnership with local enterprises.

Transition of the Recycling Ratio

Generation Status of Waste Materials by Type

Waste Materials

Since 2003, 4,000 waste cards of casting, etc., which is reused as a recycling material in the works, has not been regarded as a waste material. Therefore, the amount of waste material generated is considerably less in 2003 compared with previous years. Since data had been a large portion in terms of weight, the ratio of the amount of each waste material changed considerably.

Transition of the Amount of Waste Materials Generated

We will further make proposals for the effective use of energy leading to a reduction in cost and rising our customers' happiness.

Resources Conservation and Waste Management

In MHI, the ratio of recycling is increasing and the generation of waste materials is decreasing year by year. The Yokohama Dockyard & Machinery Works, Takanagai Machinery Works, which have already achieved “zero-emission” (zero waste beselementation and landfill), play a leading role in this field.

Transition of the Recycling Ratio

Comment of the Person in Charge

Sale & Environmental Management	
General Affairs Department

Managing Machinery Works

Atsuro Yokota

We secured the cooperation of local enterprises and achieved “zero emission.”

In the Takanagai Machinery Works, in February 2003, we decided that we would strive to achieve the objective of “zero emission.”

First of all, we visited enterprises or business establishments and pointed out that we would strive to achieve the objective of “zero emission.”

In conversation with a representative from a candidate enterprise, we came up with the idea of recovering metal from scrapped steel plate and sand in the plant, in which various new materials are used by combining advanced recycling type engines with the magnetic selector.

We established various methods of recovering resources from waste materials by altering the method of disposal, and achieved a recycling ratio of 99% in March 2004. Through this achievement of zero emission, we believe we have strengthened our partnership with local enterprises.
MHI strictly controls the use and storage of chemical substances required for production. In addition, through participating in the PRTR Law pilot project of the Environment Agency (previously named) and promoting the guidelines of the Keiretsu (Japan Federation of Economic Organizations) Voluntary Panel Program on the environment, we have been collecting and managing data on such chemical substances since 1997. Each of our plants and works manages its own MSDS (Material Safety Data Sheet) to ensure the safety of customers and employees. Concerning organic solvents and organic chemical substances, we are developing an alternative engineering method and alternative substances.

### Environmental Risk Management

To protect the global environment, in addition to observing various laws and regulations concerning the environment, it is necessary to accurately grasp risk in business activities such as contamination accidents that negatively affect the environment. At the same time, a prompt, precise response is important in emergencies. For this purpose, every works of our company prepares control systems to grasp the latent risks and holds regular training sessions and drills to improve the response in emergency situations.

#### Risk Control Systems

Every works of our company prepares a manual that stipulates methods of detecting risks that require control, methods of the daily control of such risks, measures to be taken to reduce risk if it occurs, methods of transferring information concerning risk to the parties concerned, training for employees, etc., and ensures instant response to such an emergency. Half of our domestic works face the sea. The sea will be instantly polluted if an oil leak occurs during operations at these locations. To prepare for such an emergency, all of the works regularly repeat emergency drills. For example, they practice drills for quick recovery with oil fences to minimize oil spread or train in taking effective countermeasures should chemical substances leak.

#### Measures Taken to Clean the Soil and Groundwater of Biwajima by the Air-Conditioning & Refrigeration Systems Headquarters

As a result of a survey of deep oil by boring and a survey of groundwater in the Biwajima Plant of our Air-Conditioning & Refrigeration Systems Headquarters in Aichi Prefecture that we conducted voluntarily from September 2003 to January 2004, trichloroethylene, trichloro-hexane, tetrachloroethylene, and 1,1-dichloroethylene were found in groundwater at levels exceeding the standards. This plant terminated the use of these chemical substances in 1996, but before this, organic chlorine chemical substances used during cleaning seem to have leaked from the facilities through cracks in the concrete, etc. into the soil. This situation is considered to be a cause of soil and water contamination.

In this plant, barrier walls are now installed to prevent the flow of water outside the plant compound, and pumped up groundwater is discharged outside after separating the chemical substances. In addition, volatile chemical substances are absorbed by activated carbon. From now on, we will regularly conduct monitoring surveys of the groundwater, and the results will be reported to the administrative authority.

#### Response to Complaints from Neighboring Residents

In August 2003, a reader of the "2003 Environmental Report" of MHI made a request as a reply to the questionnaire. He pointed out that in the Haneda Factory of MHI East Japan Sales Co., an affiliated company of MHI, vehicles repeatedly park unlawfully on the road with engines idling and oil flow from the factory soiling the walkway. He requested that we take proper countermeasures.

On receiving this request, our staff concerned promptly visited the factory. We gathered employees of the factory and made them aware of the facts pointed out by the reader. We let them clean the walkway, and we replaced the pavement. Moreover, we prohibited parking on the road and took measures to prevent a re-occurrence of oil flow.
**Environmental Risk Management**

To protect the global environment, in addition to observing various laws and regulations concerning the environment, it is necessary to accurately grasp risk in business activities such as contamination accidents that negatively affect the environment and to establish procedures to prevent such accidents. At the same time, a prompt, precise response is important in emergencies. For this purpose, every works of our company prepares control systems to grasp the latent risks and holds regular training sessions and drills to improve the response in emergency situations.

### Risk Control Systems

Every works of our company prepares a manual that stipulates methods of detecting risks that require control, methods of the daily control of such risks, measures to be taken to reduce risk if it occurs, methods of transferring information concerning risk to the parties concerned, training for employees, and the like. In this way, the company is aiming to create an organization that can cope with even unexpected events.

### Training in Preparing for an Emergency

Half of our domestic works face the sea. The sea will be instantly polluted if an oil leak occurs during operations at these locations. To prepare for such an emergency, all of the works regularly repeat emergency drills. For example, they practice drills for quick recovery with oil fences to minimize oil spread or train in taking effective countermeasures should chemical substances leak.

### Measures Taken to Clean the Soil and Groundwater of Biwajima by the Air-Conditioning & Refrigeration Systems Headquarters

As a result of a survey of deep soil by boring and a survey of groundwater in the Biwajima Plant of our Air-Conditioning & Refrigeration Systems Headquarters in Aichi Prefecture that we conducted voluntarily from September 2003 to January 2004, trichloroethylene, trichloroethylenes, dichloroethanes, 1,1-dichloroethanes, and 1,1-dichloroethane in amounts that exceed the standard emission value and the standard environmental value of groundwater were detected.

This plant terminated the use of these chemical substances in 1999, but before this, organic chlorine chemical substances used during cleaning seem to have leaked from the facilities through cracks in the concrete, etc., into the soil. This situation is considered to be a cause of soil and water contamination.

In this plant, barrier walls are now installed to prevent the flow of water outside the plant compound, and pumped up groundwater is discharged outside after separating the chemical substances. In addition, volatilized chemical substances are absorbed by activated carbon. From now on, we will regularly conduct monitoring surveys of the groundwater, and the results will be reported to the administrative authority.

### Response to Complaints from Neighboring Residents

In August 2003, a reader of the “2003 Environmental Report” of MHI made a request as a reply to the questionnaire. He pointed out that in the Haneda Factory of MHI East Japan Sales Co., an affiliated company of MHI, vehicles repeatedly park unlawfully on the road with oil leaking and oil flow from the factory soiling the walkway. He requested that we take proper countermeasures.

On receiving this request, our staff concerned promptly visited the factory. We gathered employees of the factory and made them aware of the facts pointed out by the reader. We let them clean the walkway, and we replaced the pavement. Moreover, we prohibited parking on the road and took measures to prevent a re-occurrence of oil flow.

---

**Control of Chemical Substances**

MHI strictly controls the use and storage of chemical substances required for production. In addition, through participating in the PRTR® pilot project of the Environment Agency (previous name) and promoting the guidelines of the Keiretsu (Japan Federation of Economic Organizations) Voluntary Plan on the Environment, we have been collecting and managing data on such chemical substances since 1997. Each of our plants and works manages its own MSDS® (Material Safety Data Sheet) to ensure the safety of customers and employees. Concerning organic solvents and organic chemical substances, we are developing an alternative engineering method and alternative substances.

### PRTR Law

This mechanism detects, confines, and reports to the administrative authority once a year the amount of such substances generated, the amount of such substances taken from plants and works, and other data. This method was established as a regulation in 1996. The amount of such substances is converted from the Report on Chemical Substances into the Air in 2003 is 54% of that in 1996, which is very close to the reduction target. The main reason for the considerable decrease in the emission amount of trichloroethylene was the switch to an alternative substance in April 2003 at the Nagoya Guidance & Propulsion Systems Works.

### PRTR Emission and Transfer Amount of Environmental Pollutants

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Chlorine Substances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>535.9</td>
<td>268.0</td>
<td></td>
</tr>
<tr>
<td>Chloroform (VCI)</td>
<td>0</td>
<td>16.4</td>
<td></td>
</tr>
<tr>
<td>Manganese and its Compounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium (VI)</td>
<td>21.7</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>7.0</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>9.4</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Styrene</td>
<td>1.0</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>1,1 Dichloro-1-Fluoroethane (HCFC-141b)</td>
<td></td>
<td>9.4</td>
<td></td>
</tr>
<tr>
<td>Bisphenol A-T type Epoxy Resin</td>
<td>0.4</td>
<td>0.9</td>
<td></td>
</tr>
</tbody>
</table>

**Environmental Risk Management**

To protect the global environment, in addition to observing various laws and regulations concerning the environment, it is necessary to accurately grasp risk in business activities such as contamination accidents that negatively affect the environment and to establish procedures to prevent such accidents. At the same time, a prompt, precise response is important in emergencies. For this purpose, every works of our company prepares control systems to grasp the latent risks and holds regular training sessions and drills to improve the response in emergency situations.

### Risk Control Systems

Every works of our company prepares a manual that stipulates methods of detecting risks that require control, methods of the daily control of such risks, measures to be taken to reduce risk if it occurs, methods of transferring information concerning risk to the parties concerned, training for employees, and the like. In this way, the company is aiming to create an organization that can cope with even unexpected events.

### Training in Preparing for an Emergency

Half of our domestic works face the sea. The sea will be instantly polluted if an oil leak occurs during operations at these locations. To prepare for such an emergency, all of the works regularly repeat emergency drills. For example, they practice drills for quick recovery with oil fences to minimize oil spread or train in taking effective countermeasures should chemical substances leak.

### Measures Taken to Clean the Soil and Groundwater of Biwajima by the Air-Conditioning & Refrigeration Systems Headquarters

As a result of a survey of deep soil by boring and a survey of groundwater in the Biwajima Plant of our Air-Conditioning & Refrigeration Systems Headquarters in Aichi Prefecture that we conducted voluntarily from September 2003 to January 2004, trichloroethylene, trichloroethylenes, dichloroethanes, 1,1-dichloroethanes, and 1,1-dichloroethane in amounts that exceed the standard emission value and the standard environmental value of groundwater were detected.

This plant terminated the use of these chemical substances in 1999, but before this, organic chlorine chemical substances used during cleaning seem to have leaked from the facilities through cracks in the concrete, etc., into the soil. This situation is considered to be a cause of soil and water contamination.

In this plant, barrier walls are now installed to prevent the flow of water outside the plant compound, and pumped up groundwater is discharged outside after separating the chemical substances. In addition, volatilized chemical substances are absorbed by activated carbon. From now on, we will regularly conduct monitoring surveys of the groundwater, and the results will be reported to the administrative authority.

### Response to Complaints from Neighboring Residents

In August 2003, a reader of the “2003 Environmental Report” of MHI made a request as a reply to the questionnaire. He pointed out that in the Haneda Factory of MHI East Japan Sales Co., an affiliated company of MHI, vehicles repeatedly park unlawfully on the road with oil leaking and oil flow from the factory soiling the walkway. He requested that we take proper countermeasures.

On receiving this request, our staff concerned promptly visited the factory. We gathered employees of the factory and made them aware of the facts pointed out by the reader. We let them clean the walkway, and we replaced the pavement. Moreover, we prohibited parking on the road and took measures to prevent a re-occurrence of oil flow.
Working Clothes Made of Plastic Bottle Fibers

To contribute to the construction of a recycling-oriented society, it is necessary to increase the ratio of use of environmentally friendly equipment and materials in our production activities by replacing the conventional equipment and materials with those having little burden on the environment. At present, our efforts are limited mostly to office supplies but we will gradually extend the coverage of green purchasing to production materials.

Green Purchasing

We established the “Basic Policy on Green Purchasing” on March 29, 2002, and are promoting green purchasing company-wide.

Green purchasing items are those indirectly involved in production such as office supplies, electrical appliances, expendable supplies in the factory and automobiles (we call them “indirect materials”). We select these goods not only from the viewpoint of their environmental burden, but also from the viewpoint of life cycle assessment considering packaging materials, consumables involved in using these goods, and time of disposal. Furthermore, in addition to restricting purchasing, we are striving to reduce the frequency of the delivery of goods by implementing planned purchasing.

Green Electric Power

We support the “Green Power Certification System” of Japan Natural Energy Co., Ltd. based upon wind power generation, and concluded a 15-year agreement with this company in April 2002 for the purchase of 1 million kWh/year of green electric power. Clean green power purchased has been utilized in the building of the Mitsubishi Head Office and the Minatomirai Industrial Museum.

Introduction of the J-Point System

In February 2004, we decided to adopt working clothes made of recycled plastic bottle fibers, and the wearing of such working clothes is being gradually implemented in our respective works and research & development centers. Fibers of about eight 1.5 liter plastic bottles are reused to make one suit of working clothes. About 30,000 suits of working clothes are used in the company for new employees and to replace the clothes now being worn. This means the reuse of about 250,000 plastic bottles per year.

Green Purchasing for Mixed Waste and Green Power Certification System

We are Responsible for the Disposal of Mixed Wastes and for Raising the Awareness of a Large Staff Regarding Separation Methods.

We used to think that this was impossible, certified Takasho Institute, Manager of the General Affairs Department. Before starting this activity, he visited all office equipment manufacturers that were involved for its advancement in this activity. However, compared to the clean office equipment manufacturing factory, where waste is not produced, the situation of the Yokohama Works is much worse. It must dispose of rust from ships and adjust to waste materials attached to ships, and the daily garbage produced by employees of the repair ships, seemed very different, and he initially concluded that zero emission could not be achieved. However, considering that it is unacceptable for a works that manufactures environmental equipment not to work towards zero emission, and that some class as new products might be created while working towards this objective, he determined to take up the task.

At that time, the breakdowns of waste of the Yokohama Works was about 50% metal, about 20% sludge, 10% wood chips, and the remainder was miscellaneous items. By classification, the solid waste was burned with steam and sludge was treated as waste in the works. A certificate was issued to the recycling of various kinds of garbage from ships. The machines separate garbage in which various substances such as plastics and metal are mixed into respective raw materials using magnetic force.

Environmental Devices

The Yokohama Dockyard & Machinery Works, engaged in the manufacture of environmental equipment such as refuse incinerators, power systems and bridges, as well as the repair of ships, contributes to “zero emission” (zero waste incineration and 0.11% of March 1999 and almost zero emission in March 2002, a half year work this plan). In the Yokohama Dockyard & Machinery Works, waste generated from ship repair amount to one third of the total waste of the works. Here has zero emission been accomplished with various kinds of waste such as garbage from the daily life of seamen, shells scraped off the hull of ships, and waste interior decoration materials in which a number of seawater materials are used. The success in the strict separation of various people concerned and the use of the treatment devices made by the works themselves.

Concerning the environmental activities of respective headquarters, divisions and works, please see our website that offers various on-the-spot reports (http://www.mhi.co.jp)

I Looked for Recycling Traders by Showing Collections of Photographs

I was a member of the seaweed material zero emission promotion, and was in charge of the selection of recycling traders and implementation of the thorough separation of waste in the works. First, I checked what waste is emitted from the works and analyzed the waste emitted. The waste was classified into about 80 categories. I took a series of photographs of the waste, and made an album of the photographs. To find methods of recycling waste, I visited various traders and showed them the album.

When zero emission was achieved, I felt less tension than rather happy or satisfied, because I thought it would be more difficult to maintain zero emission than to achieve it. After continuing zero emission for a year and half, I now feel relieved. I will brace myself to continue this important task.
Green Purchasing

To contribute to the construction of a recycling-oriented society, it is necessary to increase the ratio of use of environmentally friendly equipment and materials in our production activities by replacing the conventional equipment and materials with those having little burden on the environment. At present, our efforts are limited mostly to office supplies but we will gradually extend the coverage of green purchasing to production materials.

Green Purchasing

We established the "Basic Policy on Green Purchasing" on March 29, 2002, and are promoting green purchasing company-wide.

Green purchasing items are those indirectly involved in production such as office supplies, electrical appliances, expendable supplies in the factory and automobiles (we call them "indirect materials"). We select these goods not only from the viewpoint of their environmental burden, but also from the viewpoint of lifecycle assessment considering packaging materials, consumables involved in using these goods, and time of disposal.

Furthermore, in addition to restraining purchasing, we are striving to reduce the frequency of the delivery of goods by implementing planned purchasing.

Introduction of the J-Point System

We have introduced the J-Point System of Intanet to purchase indirect materials such as office supplies and factory consumables (MHI indirect Materials Intensive Purchasing System). With this system, we can encourage the preferential purchase of environmentally friendly goods and simultaneously identify the results of green purchasing in units of individuals, sections and departments, and works.

Green Electric Power

We support the "Green Power Certification System" of Japan Natural Energy Co., Ltd. based upon wind power generation, and concluded a 15-year agreement with this company in April 2002 for the purchase of 1 million kWh/year of green electric power. Clean green power purchased has been utilized in the building of the Mitsubishi Head Office and the Minatomirai Industrial Museum.

"Green Power Certification System"

Green power is electric power generated without emitting a large amount of CO₂ and without destroying the surrounding environment. Green power is handled at the price where the added value due to reduction in local taxes, reduction in CO₂ emissions, etc. is included. A certificate issued to green power purchasers showing the amount of green power used in their operations: this encourages enterprises and local government bodies to take further necessary measures for environment protection.

Green power certificates

Concerning the environmental activities of respective headquarters, divisions and works, please see our website that offers various on-the-spot reports. (http://www.mhi.co.jp)

Introduction of Works Activities

"Nothing Is Impossible!" — A Bold Try for Zero Emission by the Yokohama Dockyard & Machinery Works —

The Yokohama Dockyard & Machinery Works, engaged in the manufacture of environmental equipment such as refuse incineration, power systems and bridges, as well as repair of ships, concluded a "zero emission" (zero waste generation and zero air emission) agreement with the MHI Group in March 1998, and aimed at zero emission in March 2001, a half year earlier than planned.

In the Yokohama Dockyard & Machinery Works, waste generated from ship repair amounts to one-third of the total waste of the works. We have been zero emission been accomplished with various kinds of waste such as garbage from the daily life of seamen, shells scraped off the hulls of ships, and waste interior decoration materials in which a number of raw materials are used. The key to the decarbonization of such waste is the recycling of waste materials.

We are Responsible for the Disposal of Mixed Wastes

"Ecomark" shows that 50% or more of the material used is recycled fibers. The materials of the working clothes are composed of 55% recycled polyester, 35% cotton and 10% new polyester. The fabrics are cut into slabs of various sizes and each pair of working clothes is made from 12 slabs. When cut slabs are used up, the remaining slabs are recycled into sludge, which is burnt and recycled into slag to produce cement. As a result, the total amount of waste is reduced by 50%.

Concerning the recycling of cut slabs, the best method is to break them into pieces while they are still hot, mix them with coal and other substances, and then burn them. This is done in the factory where the waste materials are not diverse. The sludge thus produced, however, is not suitable for cement production. Therefore, we sell it to a cement company, and it is used as a fuel. This is a good example of recycling of waste into something useful.

We established the "Basic Policy on Green Purchasing" on March 29, 2002, and are promoting green purchasing company-wide, and concluded a 15-year agreement with this Japan Natural Energy Co., Ltd. based upon wind power (Green Electric Power System). With this system, we can encourage the preferential purchase of environmentally friendly goods and simultaneously identify the results of green purchasing in units of individuals, sections and departments, and works.

Concerning the environmental activities of respective headquarters, divisions and works, please see our website that offers various on-the-spot reports. (http://www.mhi.co.jp)

We have introduced the J-Point System of Intanet to purchase indirect materials such as office supplies and factory consumables (MHI indirect Materials Intensive Purchasing System). With this system, we can encourage the preferential purchase of environmentally friendly goods and simultaneously identify the results of green purchasing in units of individuals, sections and departments, and works.

"Green Power Certification System"

Green power is electric power generated without emitting a large amount of CO₂ and without destroying the surrounding environment. Green power is handled at the price where the added value due to reduction in local taxes, reduction in CO₂ emissions, etc. is included. A certificate issued to green power purchasers showing the amount of green power used in their operations: this encourages enterprises and local government bodies to take further necessary measures for environment protection.

Green power certificates

Concerning the environmental activities of respective headquarters, divisions and works, please see our website that offers various on-the-spot reports. (http://www.mhi.co.jp)
Commitment to Our Customers

**Support System for PLM Activity**

We strive to get a good grasp of what our customers really want and respond by offering products and services that exceed those of other corporations. This way, we seek to gain a dominant market position and achieve sales and profit growth. Recognizing that the company may have been deficient in listening to its customers' voices, we decided that the primary challenge is to ensure our survival in the 21st century is to “provide products and services that reward the confidence that customers have in us,” and “to develop a customer-oriented corporate culture.”

**Services that Support the Safety and Reliability of Nuclear Power**

Nuclear power plants have a history of carrying out thoroughgoing maintenance programs that prioritize safety. Preventive maintenance designed to eliminate problems before they happen and retain the integrity and dependability of plant facilities has supported the good track record of safety and reliability of Japan’s nuclear power plants. The recent power market liberalization is imposing a demand for further improvement in the economy of power generation.

To fulfill the need to improve safety/reliability and to improve economy at the same time, we need ever more sophisticated, comprehensive engineering capability as well as the ability to provide highly reliable equipment and facilities.

**Implementing CS Activity to Build a Customer-Oriented Corporate Culture**

Pursuing our creed that “We strongly believe that the customer comes first and that we are obligated to be an innovative partner to society,” we are pressing ahead with our CS (Customer Satisfaction) activities at every level. Specifically, we try to get a good grasp of what our customers really want and respond by offering products and services that exceed those of other corporations. This way, we seek to gain a dominant market position and achieve sales and profit growth.

Recognizing that the company may have been deficient in listening to its customers’ voices, we decided that the primary challenge is to ensure our survival in the 21st century is to “provide products and services that reward the confidence that customers have in us,” and “to develop a customer-oriented corporate culture.”

**Evaluation of Integrity of Equipment and Facilities, and Drawing Up Maintenance Programs**

Nuclear power plants are obliged to evaluate all major plant equipment for integrity against aging-associated degradation before the 30 years-in-service period is complete and to present a report disclosing the results. This is called PIM (Plant Integrity Management) activity. MHI, on the strength of a database of past plant surveys, knowledge gained from independent research, and expertise gained as a primary plant contractor, can assist nuclear power plants in not only evaluating the integrity of their current equipment but also in forecasting aging-related events that may occur in their equipment. Because there are many types of equipment to be evaluated, and responsibility for them is divided among a number of design departments in our organization, an overarching supervising unit is formed which takes charge of plant equipment evaluation projects across multiple design functions to provide customers with overall assistance.

**Staying in Closer Touch with Customers to Offer Speedier Service**

It is important that we establish a plant maintenance program and associated research work in a timely manner, which responds to customers' ideas and preferences. To this end, we devised a service system that keeps close contact with customers through the service managers assigned to a specific plant. The service manager is trained to look at things from the customer's point of view and promptly provide the necessary information. Another provision for sophisticated service is an organizational setup that acts across a number of the machinery works to ensure a smooth, quick response to customers’ needs.

**Setting Up CS Centers in the Machine Tool Division**

MHI handles a wide variety of products ranging from power plants and machine tools to mass production machines such as air-conditioners. Customer services including complaint handling and user database management are handled by the individual organizational units that are divided product-by-product.

As an example, MHI’s Machine Tool Division (which handles sales in Japan) set up CS activity centers for dealing with customer inquiries, complaints, and technical inquiries on new products. The CS centers are divided into three departments: (1) Overall Customer Service, (2) Customer Technical Support, and (3) Sales and Marketing. The overall customer service handles inquiries on past products, customer technical support responds to customer problems, and sales and marketing functions to provide customers with overall assistance.

**To Public Works, Local Residents Are Our Customers, and We Must Keep Them Informed**

In public works projects including the construction of roads and bridges, there is a need for a greater degree of information disclosure that allows affected local communities to have a better understanding of a project’s benefits.

When awarded a contract for public works, we not only consider that the owner or the local government is our customer, but also that the local residents are our customers.

We believe that, as a contractor, we must make vigorous efforts to share information with local residents, in addition to successfully completing the work.

We furnish the owner with technical information in the form of a proposal for a process that shortens the construction period and keeps economic losses to a minimum or for a new working technique that clears traffic congestion at a job site.

The methods we use for offering information to local residents include tours to the work site, study classes for elementary school children, and advanced sessions for high-school students. At the same time, we direct our efforts to public relations (PR) using locally popular media such as cable TV networks.
Commitment to Our Customers

Our customer-support organization

Support System for PLM Activity

Evaluation of the Integrity of Equipment and Facilities, and Drawing Up Maintenance Programs

Nuclear power plants have a history of implementing maintenance programs that prioritize safety. Preventive maintenance is essential to maintain the reliability and dependability of plant facilities. Our company has supported the goal of having safety and reliability at the forefront of our company’s nuclear power plants.

The recent power market liberalization is imposing a demand for further improvement in plant facilities, and the development of new power sources is expected. To meet these challenges, MHI’s customer support organization is responding by offering comprehensive services, including maintenance support, consulting, and new technology. Our commitment to our customers is reflected in our efforts to provide them with the highest level of support.

Setting Up CS Centers in the Machine Tool Division

MHI handles a wide variety of products ranging from power plants and machine tools to mass production machines such as air-conditioners. Our customer services include complying with customer requirements on an individual basis to provide customers with over- all assistance.

Customer's voice

In Public Works, Local Residents Are Our Customers, and We Must Keep Them Informed

In public works projects including the construction of roads and bridges, there is a need for a greater degree of information disclosure that allows affected local communities to have a better understanding of a project's benefits. When awarded a contract for public works, we not only consider that the owner or the local government is our customer, but also that the local residents are our customers. We believe that, as a contractor, we must make vigorous efforts to share information with local residents, in addition to successfully completing the work.

We must make vigorous efforts to share information with local residents, in addition to successfully completing the work. We furnish the owner with technical information in the form of a proposal for a process that shortens the construction period and keeps economic losses to a minimum and for a new working technique that clears traffic congestion at a job site.

The methods we use for offering information to local residents include tours to the work site, study classes for elementary school children, and advanced sessions for high school students. At the same time, we direct our efforts to public relations (PR) using locally popular media such as cable TV networks.

December, 2003, was attended by 350 company staff members including President Tsukuda and other executives. They listened to 17 teams presenting their CS-related efforts. A vigorous Q&A session followed.

Framework of CS Center

Manager, CS Center

Manager, CS Center Managing Group

Front Team and Parts Group

Service persons

We recognize that the company's performance (whose sales performance is determined by the division manager) is not only related to the division manager's experience or benefits but also to the overall performance of the company. This is why we strive to improve customer service through an across-department approach where it consolidates CS Centers (that contact customers firsthand) and goes as far as guiding or directing other groups such as Marketing and Technology.

The CS Center is composed of three units: the CS group, the Front Team, and the Parts Group. The CS Group attains greater use of IT for service activity, training service people, and for technical studies on service-related issues. It works with the Front Team and Parts Group to “push for an improved service system.”

The Front Team is the customer’s primary contact. Through communication with customers, it conducts activities to “respond quickly to service requirements to ensure the uninterrupted operation of the customer’s machine.”

The Parts Group is responsible for the supply and management of service parts in general. It pursues service operation geared to “deliver parts to the customer without delay.”

In our company, a grass-roots approach is used to tackle CS activities. Teams are formed on a by-product or by-organizational unit basis. There are 3,000 teams, and roughly 4,000 subjects are tackled. A forum is held once a year where selected teams present their experiences or benefits that the achievements they have made.

The 2nd such gathering, held in

Sociality Report

Commitment to Our Customers

Highly reliable equipment and facilities.

Capability as well as the ability to provide generation.

Paradoxically, we try to get a good grasp of what our customers really want and respond by offering products and services that exceed those of other corporations. This way, we seek to gain a dominant market position and achieve sales and profit growth.

Recognizing that the company may have been deficient in listening to its customers’ voices, we decided that the primary challenges to ensure our survival in the 21st century is “to provide products and services that reward the confidence that customers have in us,” and “to develop a customer-oriented corporate culture.”

It is important that we establish a maintenance program and associated research work in a timely manner, which responds to customers’ needs and preferences. To this end, we devised a service system that keeps close contact with customers through the service managers assigned to a specific plant. The service manager is trained to look at things from the customer’s point of view and promptly provide the necessary information. Another provision for sophisticated service is an organizational setup that acts across a number of the machinery works to ensure a smooth, quick response to customers’ needs.

In our company, a grass-roots approach is used to tackle CS activities. Teams are formed on a by-product or by-organizational unit basis. There are 3,000 teams, and roughly 4,000 subjects are tackled. A forum is held once a year where selected teams present their experiences or benefits that the achievements they have made.

The 2nd such gathering, held in

Sociality Report

Commitment to Our Customers

Highly reliable equipment and facilities.

Capability as well as the ability to provide generation.

Paradoxically, we try to get a good grasp of what our customers really want and respond by offering products and services that exceed those of other corporations. This way, we seek to gain a dominant market position and achieve sales and profit growth.

Recognizing that the company may have been deficient in listening to its customers’ voices, we decided that the primary challenges to ensure our survival in the 21st century is “to provide products and services that reward the confidence that customers have in us,” and “to develop a customer-oriented corporate culture.”

It is important that we establish a maintenance program and associated research work in a timely manner, which responds to customers’ needs and preferences. To this end, we devised a service system that keeps close contact with customers through the service managers assigned to a specific plant. The service manager is trained to look at things from the customer’s point of view and promptly provide the necessary information. Another provision for sophisticated service is an organizational setup that acts across a number of the machinery works to ensure a smooth, quick response to customers’ needs.
Commitment to Our Employees

Helping Individual Staff Members Improve Themselves and Letting Them Feel Fulfilled

MHI thinks that there are essential conditions to its continued growth and prosperity. That is, we must: 1) encourage individual staff members to improve their own performance and 2) combine their forces and make them work synergetically to create company-wide competency. The role of our personnel department is to "help individual staff members improve themselves and make them feel fulfilled."

Specifically, we made far-reaching changes to our employee training system to promote a human resources development policy that assists each employee to improve their own performance and move toward self-realization. At the same time, we are in the process of: 1) reforming our personnel treatment system with more emphasis on performance, 2) introducing by-department recruiting practices, and 3) developing methods to make fuller use of female employees. All these add up to the creation of a corporate culture that gives greater respect to individuals, helps them develop their potential, and allows them to make the most of their capabilities.

Pursuing Both Better Working Conditions and Company Growth

The labor-management relationship of our company is based on the spirit that both parties are committed to mutual understanding as stipulated in the governing agreement. The labor-management committee, an equal party to the agreement, is a critical factor in our success. It is the committee that elaborates and puts into effect the company’s human resources development policy.

In-house Recruiting System to Reinforce Employees

An in-house recruiting system has been run since 1992 with the goal of: 1) considering employees’ initiative or interest and 2) offering employees a chance to find a position new to or different from their previous one.

Developing Human Resources with An Eye toward the Future

A key issue in promoting business operations is whether we can equip ourselves with a good supply of personnel who have insight and can look at things from a wide perspective. Therefore, we subject our employees, from the day they join us, to various training programs. These programs are: 1) based on OJT (On-the-Job Training), 2) multi-layered and divided among job titles, and 3) organized to develop resources with a view to the future. With the rapid progress of globalization, the way we do business is diversifying from, for example, the simple export of products to the implementation of internationally coordinated projects and overseas production schemes. To secure staff members who can respond to this trend, we have training programs containing, among other things, in-house foreign language teaching courses and overseas study. In addition, to ensure that store floor employees-employee issues at both company level and operation center level. The introduction of any new system that affects workers or alterations thereto is put into practice by the consent of both the workers and the management.

In-house Recruiting System to Reinforce Employees

An in-house recruiting system has been run since 1992 with the goal of: 1) considering employees’ initiative or interest and 2) offering employees a chance to find a position new to or different from their previous one.

Developing Human Resources with An Eye toward the Future

A key issue in promoting business operations is whether we can equip ourselves with a good supply of personnel who have insight and can look at things from a wide perspective. Therefore, we subject our employees, from the day they join us, to various training programs. These programs are: 1) based on OJT (On-the-Job Training), 2) multi-layered and divided among job titles, and 3) organized to develop resources with a view to the future. With the rapid progress of globalization, the way we do business is diversifying from, for example, the simple export of products to the implementation of internationally coordinated projects and overseas production schemes. To secure staff members who can respond to this trend, we have training programs containing, among other things, in-house foreign language teaching courses and overseas study. In addition, to ensure that store floor employees-employee issues at both company level and operation center level. The introduction of any new system that affects workers or alterations thereto is put into practice by the consent of both the workers and the management.

In-house Recruiting System to Reinforce Employees

An in-house recruiting system has been run since 1992 with the goal of: 1) considering employees’ initiative or interest and 2) offering employees a chance to find a position new to or different from their previous one.

Developing Human Resources with An Eye toward the Future

A key issue in promoting business operations is whether we can equip ourselves with a good supply of personnel who have insight and can look at things from a wide perspective. Therefore, we subject our employees, from the day they join us, to various training programs. These programs are: 1) based on OJT (On-the-Job Training), 2) multi-layered and divided among job titles, and 3) organized to develop resources with a view to the future. With the rapid progress of globalization, the way we do business is diversifying from, for example, the simple export of products to the implementation of internationally coordinated projects and overseas production schemes. To secure staff members who can respond to this trend, we have training programs containing, among other things, in-house foreign language teaching courses and overseas study. In addition, to ensure that store floor employees-employee issues at both company level and operation center level. The introduction of any new system that affects workers or alterations thereto is put into practice by the consent of both the workers and the management.

In-house Recruiting System to Reinforce Employees

An in-house recruiting system has been run since 1992 with the goal of: 1) considering employees’ initiative or interest and 2) offering employees a chance to find a position new to or different from their previous one.

Developing Human Resources with An Eye toward the Future

A key issue in promoting business operations is whether we can equip ourselves with a good supply of personnel who have insight and can look at things from a wide perspective. Therefore, we subject our employees, from the day they join us, to various training programs. These programs are: 1) based on OJT (On-the-Job Training), 2) multi-layered and divided among job titles, and 3) organized to develop resources with a view to the future. With the rapid progress of globalization, the way we do business is diversifying from, for example, the simple export of products to the implementation of internationally coordinated projects and overseas production schemes. To secure staff members who can respond to this trend, we have training programs containing, among other things, in-house foreign language teaching courses and overseas study. In addition, to ensure that store floor employees-employee issues at both company level and operation center level. The introduction of any new system that affects workers or alterations thereto is put into practice by the consent of both the workers and the management.
Commitment to Our Employees

Helping Individual Staff Members Improve Themselves and Letting Them Feel Fulfilled

MHI thinks that there are essential conditions to its continued growth and prosperity. That is, we must: 1) encourage individual staff members to improve their own performance and 2) combine their forces and make them work synergistically to create company-wide competency. The role of our personnel department is to “help individual staff members improve themselves and make them feel fulfilled.”

Specifically, we made far-reaching changes to our employee training system to promote a human resources development policy that assists each employee to improve their own performance and move toward self-realization. At the same time, we are in the process of 1) reforming wage/personnel treatment system with more emphasis on performance, 2) introducing by-department recruiting practices, and 3) developing methods to make fuller use of female employees. All these add up to the creation of a corporate culture that gives greater respect to individuals, helps them develop their potential and allows them to make the most of their capabilities.

Pursuing Both Better Working Conditions and Company Growth

The labor-management relationship of our company is based on the spirit that both parties are committed to mutual understanding as stipulated in the governing agreement. Therefore, we subject our employees to both better working conditions and company development by solving all labor-management issues peacefully.

Various types of operational conference take place to discuss employment issues at both company level and operation center level. The introduction of any new system that affects workers or alterations thereto is put into practice by the consent of both the workers and the management.

In-house Recruiting System to Reinforce Employees

An in-house recruiting system has been run since 1992 with the goal of: 1) considering employees’ initiative or interest and 2) offering employees a chance to find a position that suits their own interests.

Developing Human Resources with An Eye toward the Future

A key issue in promoting business operations is whether we can equip ourselves with a good supply of personnel who have insight and can look at things from a wide perspective. Therefore, we subject our employees, from the day they join us, to various training programs. These programs are: 1) based on OJT (On-the-Job Training), 2) multi-layered and divided among job titles, and 3) organized to develop employees with a horizon toward the future.

With the rapid progress of globalization, the way we do business is diversifying from, for example, the simple export of products to the implementation of international cooperation projects and overseas production schemes. To secure staff members who can respond to this trend, we have training programs containing, among other things, in-house foreign language-teaching courses and overseas study. In addition, to ensure that shop floor techniques and skills (which are the basis of manufacturing operations) are passed on from one generation of workers to the next, we systematically run a detailed training program targeting technical workers.

Training System for Technical Workers

<table>
<thead>
<tr>
<th>Supervisor Training</th>
<th>Crew Training</th>
<th>Mirroring Skill Matrix</th>
<th>Ability to achieve improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Follow-up Seminar (leadership and teaching)</td>
<td>Technical leadership</td>
<td>Flavor training</td>
<td>Working in teams</td>
</tr>
<tr>
<td>Management Follow-up Seminar (leadership and teaching)</td>
<td>Technical leadership</td>
<td>Flavor training</td>
<td>Working in teams</td>
</tr>
<tr>
<td>Management Follow-up Seminar (leadership and teaching)</td>
<td>Technical leadership</td>
<td>Flavor training</td>
<td>Working in teams</td>
</tr>
<tr>
<td>Management Follow-up Seminar (leadership and teaching)</td>
<td>Technical leadership</td>
<td>Flavor training</td>
<td>Working in teams</td>
</tr>
</tbody>
</table>

Tracking results in training is critical to the performance of technical workers. It shows how well the training has worked and how it can be improved.

Basic skills and basic knowledge

- Understanding the elementary mathematics underlying the working of basic systems
- Understanding safety regulations and adherence to the safe operation of equipment
- Understanding the necessary production processes in the business

Work experience

- Understanding the necessary production processes in the business
- Understanding the necessary production processes in the business
- Understanding the necessary production processes in the business
- Understanding the necessary production processes in the business
- Understanding the necessary production processes in the business

Commitment to Our Employees

Commitment to Our Employees

Commitment to Our Employees
Commitment to Local Communities

**“MHI, a Premier Global Organization” in Touch with Local Communities**

Contribution to society through business activities

Our basic philosophy is shown in our creed: “We strongly believe that the customer comes first and that we are obligated to be an innovative partner to society.” We will continue contributing to society as a global corporation through the delivery of safe, excellent products and services brought by our technology and human resources.

Emphasizing a Trust-based Relationship with Local Communities

Our respective regional offices and works have continuously implemented philanthropic activities compatible with the characteristics of the community, of which they are a member. It is our belief that strengthening the relationship with local communities puts us on a sounder basis. We will continue to conduct activities that contribute to communities and nurture their trust in us.

**Philanthropic Activities Conducted by MHI Across the Country**

Reaching students on school excursions for a plant tour (Kobe Shipyard & Machinery Works)

The Kobe Shipyard & Machinery Works has a network of representatives in Japan that supports the modernization of Japan’s industry, including the bell in which the factory’s name, MHI, is once bell and the oldest marine bridge designated an important cultural property of the nation. These are open to the public, and students often visit on school excursions.

Shinsen (Kobe Shipyard & Machinery Works) Summer School

The Kobe Shipyard & Machinery Works invites upper-grade primary school children and their parents during the summer holidays to an event featuring a plant tour and hands-on scientific experience. It also sponsors a radio program titled “Science Science Science” for elementary school children, which is broadcast by the local radio station.

Cleaning areas around factories (across Japan)

Employees of factories across the country volunteer to do cleaning activities, such as picking up litter in the area. Each employee, as a member of the local community, does his or her part to preserve the environment in the neighborhood.

Laundry services open to public (Kagoshima, Kobe and Shimonoseki Shipyard & Machinery Works)

MHI’s three shipyards offer the laundry services of various clothes for tokens collected from the local residents and the public. Conducting this is a way residents can test out the environment in an enjoyable experience for the shipyards.

Donating skillshitsch (Mitsukimi Works)

Kilpilla, which have become rare, now thrive in the drainage ditch on the premises of the Mitsukimi Works. Every year, we donate the small fish to nearby kindergartners and elementary schools as teaching material to breed and observe.

Charity musical (Head Office)

Better known as the Mihoko Group, it was founded in 1994 with the purpose of using music to contribute to the community. It holds various concerts, including charity concerts, and regularly organizes various fund-raising events to benefit various charities.

**Sponsoring Disaster Relief Activities in Quake-stricken Southeast Iran**

We have traditionally taken part in relief efforts in stricken areas around the world. In the case of the earthquake that devastated Iran’s southwest district in December 2003, we donated eight of our compact generators to the Iranian Red Cross.

**A Museum Where You Can Learn with Enjoyment**

The Mitsubishi Minatomirai Industrial Museum was founded in June 1994 with the hope of becoming a place where young people who are to shoulder the future can entertain dreams through experiencing science and technology firsthand. The museum is divided into six display zones: “Environment,” “Space,” “Ocean,” “Construction,” “Energy” and “Technologies.” Exhibits are in the form of real machines or models, panels, video images, animations, and so on. All of these comprehensively explain various products and technologies that support our everyday lives. They present, in an easy-to-understand manner, those state-of-the-art technologies that people usually have the least chance to get in touch with, so that people can have a better understanding of the relationship between technology and society and life.

Mitsubishi Minatomirai Industrial Museum

— We want you to have hands-on experience with the fun that science and technology have to offer —

This museum features many elaborate hands-on exhibits. For example, you can have hands-on experience with helicopter piloting or with design operation for a ship or airplane. In addition to the permanent exhibits, we present a special exhibition from time to time, with a variety of events for school children. These include hands-on or experiment classes, quiz rallies, movies, lectures, and competition contests. Now that the school curriculum allocates less time to hard-and-fast scientific education, we hope that more children will visit and enjoy the joy of gaining the basic rules behind various phenomena and the joy of producing things with their own hands.

**Supporting Disaster Relief Activities in Quake-stricken Southeast Iran**

We and three associated companies donated to the Science & Technology Center, Jubail, Eastern Saudi Arabia, a parcel of teaching materials for children dealing with heat science.

**Cooperation with the Keidanren-Japan Business Federation-Non Consumers Fund**

This fund is set up primarily to aid developing countries in the Asia-Pacific Region to preserve their natural environment. MHI cooperates in this fund every year from a philanthropic standpoint.
Commitment to Local Communities

MH1: A Premier Global Organization in Touch with Local Communities

Our basic philosophy is shown in our creed: “We strongly believe that the customer comes first and that we are obligated to be an innovative partner to society.” We will continue contributing to society as a global corporation through the delivery of safe, excellent products and services brought by our technology and human resources.

Emphasizing a Trust-based Relationship with Local Communities

Our respective regional offices and works have continuously implemented philanthropic activities compatible with the characteristics of the community, of which they are a member. It is our belief that strengthening the relationship with local communities puts us on a sounder basis. We will continue to conduct activities that contribute to communities and nurture their trust in us.

MH2: Philanthropic Activities Conducted by MHI Across the Country

Philanthropic Activities

- Reaching students in school excursions for a plant tour (Nagasaki Shipyard & Machinery Works)
- Takasago Pictures Competition (Takasago Machinery Works)
- Shinsen (Kobe Shipyards & Machinery Works): Summer School
- Cleaning areas around factories (across Japan)
- Launching ceremonies open to public (Kobe and Okinawa Shipyards & Machinery Works)
- Matching gift (Head Office)
- Donating killfish (Koshima Machinery Works)
- Charity musical (Head Office)

We have traditionally taken part in relief efforts in stricken areas around the world. In the case of the earthquake that devastated Iran’s southeast district in December 2003, we donated 81 of our compact generators to the Iraqi Red Cross.

Funding Relief Activities in Quake-stricken Southwest Iran

MHI endorses the purpose of the 1% (One-percent Club) conducted by Kodanren (Japan Federation of Economic Organizers) as a member of the club since its foundation. We support our philanthropic expenditure every year.

By-field Expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>1% Expenditure (in million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>362</td>
</tr>
<tr>
<td>2001</td>
<td>1,254</td>
</tr>
<tr>
<td>2002</td>
<td>2,476</td>
</tr>
<tr>
<td>2003</td>
<td>4,762</td>
</tr>
</tbody>
</table>

Matching Gift

MHI and three associated companies donated to the Science & Technology Center in Saudi Arabia.

Charity Activities for Children

MHI gives children the opportunity to take a fresh look at their current lifestyle. Problems run deep, especially regarding energy and the environment. We operate this facility in the hope that children understand what will happen if something is done or is not done, become aware of the root of the problem and the principles they can apply to solve it.

We hope that children who are to shoulder the future acquire, in this place, a wide variety of knowledge. And it will be a great pleasure if a visit becomes an occasion that turns some of them into future scientists.

Mitsubishi Minatomirai Industrial Museum

We want you to have hands-on experience with the fun that science and technology have to offer.

A Museum Where You Can Learn with Enjoyment

This museum features many elaborate hands-on exhibits. For example, you can have hands-on experience with helicopter piloting or with design operation for a ship or airplane.

In addition to the permanent exhibits, we present a special exhibition from time to time, with a variety of events for school children. Those include handcraft or experiment classes, quiz rallies, movies, lectures, and competitions. But that’s not all. Now that the school curriculum allocates less time to handicrafts, the future acquire, in this place, a wide variety of knowledge. And it will be a great pleasure if a visit becomes an occasion that turns some of them into future scientists.

Mitsubishi Minatomirai Industrial Museum

We hope that children who are to shoulder the future acquire, in this place, a wide variety of knowledge. And it will be a great pleasure if a visit becomes an occasion that turns some of them into future scientists.
Commitment to Our Shareholders, Suppliers, and Institutions

Hil places great value on building trust with its shareholders. Thus, we strive not only to stabilize and improve our financial performance but also to render our disclosure more effective.

To be more specific, we have renewed our Web site to provide shareholders with a higher degree of convenience and have also set up a new website entitled “To Individual Investors” to facilitate investing individuals’ understanding about us.

In addition, from June 2004, we will distribute a magazine entitled “To Our Shareholders,” an enriched version of the former “Operation Report” provided to our shareholders.

Furthermore, to cater to the needs of foreign investors, our website carries financial statements, exhibits used in financial briefings, and other materials translated into English.

Sociality Performance Overview

Recognizing the need to improve the objectiveness and transparency of the information it publicizes, MHI is running a scheme to understand its sociality performance and disclose the findings with reference to the indicators suggested in the GRI Guideline.2

Those aspects of our sociality performance that are not referred to on Pages 41 through 47 are described on this page.

Each indicator is preceded by the corresponding designation used with the GRI Guideline.

(LA - labor practices and fair work conditions; HR - Human Rights; PR - product liability)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA3</td>
<td>By-area unionization ratio</td>
</tr>
<tr>
<td>LA4</td>
<td>Employees are allowed to claim information to be consulted or regulated in regard to the operation of the company</td>
</tr>
<tr>
<td>LA5</td>
<td>Recording and notification of on-the-job accidents/injuries and occupational diseases</td>
</tr>
<tr>
<td>LA6</td>
<td>Safety &amp; health committee composed of both workers and management</td>
</tr>
<tr>
<td>LA8</td>
<td>Policy and program for HIV/AIDS</td>
</tr>
<tr>
<td>LA9</td>
<td>By-rank/by-range of work amount of training time</td>
</tr>
<tr>
<td>HR5</td>
<td>Freedom to organize a labor union</td>
</tr>
<tr>
<td>HR6</td>
<td>Abolition of child labor</td>
</tr>
<tr>
<td>HR7</td>
<td>Abolition of forced/obligated labor</td>
</tr>
<tr>
<td>PR2</td>
<td>Presentation of product and quality information</td>
</tr>
<tr>
<td>PR3</td>
<td>Protection of customers’ privacy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>LA3</th>
<th>LA4</th>
<th>LA5</th>
<th>LA6</th>
<th>LA8</th>
<th>LA9</th>
<th>HR5</th>
<th>HR6</th>
<th>HR7</th>
<th>PR2</th>
<th>PR3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,233</td>
<td>3,847</td>
<td>1,042</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Global Reporting Initiative - Sustainability Reporting Guideline

2 A guideline presented by GRI, created as a joint project between CERES (a U.S. non-profit organization) and the U.N. Environment Program (UNEP) to provide a framework to develop a “sustainability report”

Table: Commitment to Our Shareholders, Suppliers, and Institutions

<table>
<thead>
<tr>
<th>Field</th>
<th>Name of organization</th>
</tr>
</thead>
</table>
| ① Social welfare | Japan Wheaties Basketball Federation, Japanese Red Cross Society, Life Line/Crunch Telephone Counseling, The Society for Support to Japanese Child Welfare, the Childcare Chest of Tokyo, Child 

We are affiliated with NPOs and NGOs that play an active part in many fields including the environment, society, and support their efforts.
Commitment to Our Shareholders, Suppliers, and Institutions

We use no child labor whatsoever.

We are affiliated with NPOs and NGOs that play an active part in many fields including the environment and society, and support their efforts.

Sociality Performance Overview

Recognizing the need to improve the objectiveness and transparency of the information it publicizes, MHI is running a scheme to understand its social performance and disclose the findings with reference to the indicators suggested in the GRI Guide.

Those aspects of our sociality performance that are not referred to on Pages 41 through 47 are described on this page. Each indicator is preceded by the corresponding designation used with the GRI Guide.

(LA - labor practices and fair work conditions; HR - Human Rights; PR - product liability)

Indicator | Performance
--- | ---
LA3 By-area unionization ratio | The unionization ratio in Japan is 100%.
LA4 Compliance with laws and regulations | We make decisions on important issues after consultation with the union.
LA5 Recording and notification of on-the-job accidents/injuries and occupational diseases | Established procedure is such that in the event of an accident or injury, whether the affected person is our own employee or a subcontractor, the operation center concerned promptly reports the particulars to the headquarters and other operation centers. Based on the report, the procedure also requires company-wide inspection, corrective measures, and employee training to prevent recurrence of similar accident or injury.
LA6 Safety & health committee composed of both workers and management | Each operation center holds a meeting of the health and safety committee made up of both workers and employee members more than once a year. The meeting discusses issues relating to health and safety and is attended to present its views to a plant or office head of the operation centers.
LA8 Policy and program for HIV/AIDS | We tackle this problem using as a basis the "Guideline Relating to Workplace AIDS Problem" issued by the Labor Ministry and other references. Rules are set to ensure that employees are not tested for HIV infection or discriminated against in promotion or employment on the grounds of infection.
LA9 By-rank/b-ry-range of work amount of training time | The data of 2003 remain to be summarized. The total amount of training time up to 2002 is shown on the right.
HR5 Freedom to organize a labor union | This is a right guaranteed by law. We abide by the law.
HR6 Abortion of child labor | We use no child labor whatsoever.
HR7 Abortion of forced/obligated labor | All our staff members find employment and stay with the company of their own free will.
PR2 Presentation of product and quality information | Disclosure/communication of information relating to products or services is carried out under the control of the Environment Management System and the Quality Management System.
PR3 Protection of customers’ privacy | We have a “Confidentiality Management Manual” that determines corporate policies and important considerations to be noted to ensure that confidential materials, including customer information, are handled properly and are protected. This manual is provided to all employees, and they also receive training on this matter.
The Okuma School of Public Management, Waseda University
Prof. Masayasu Kitagawa

MHI will commemorate the 100th anniversary of its founding this year. The company has exhibited an “Environmental Report” focusing on existing environmental conservation and created a “Social and Environmental Report” corresponding to Social Corporate Responsibility (CSR).

Greetings by President Tsukuda strongly support the idea using the expression, “message from the president.” In his greetings, he says, “We will manage the company with full commitment to our Corporate Social Responsibility (CSR).” He clearly shows his vision and mission and explains the expression “manage the company with full commitment,” which was not mentioned in the previous Environmental Report. Following his line, “We will fulfill our Corporate Social Responsibility (CSR) through company businesses for the well-being of the people of the world.” This report shows the relation with the stakeholders on the two facing pages featuring the external issue of creating a sustainable society. I appreciate their approach, which is very positive and has never before been seen in MHI.

The details of the report shows the current situations, goals, and numerical values to a large extent based on their vision and mission; however, qualitative expressions are seen more often in social reports than environmental reports.

This report is very rigorous as a whole. What attracted me most were comments by the staff in charge. For example, the group leader of the Machinery department says, “Variances from overseas were almost at our target.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart.

Greetings by President Tsukuda strongly support the idea using the expression, “message from the president.” In his greetings, he says, “We will manage the company with full commitment to our Corporate Social Responsibility (CSR).” He clearly shows his vision and mission and explains the expression “manage the company with full commitment,” which was not mentioned in the previous Environmental Report. Following his line, “We will fulfill our Corporate Social Responsibility (CSR) through company businesses for the well-being of the people of the world.” This report shows the relation with the stakeholders on the two facing pages featuring the external issue of creating a sustainable society. I appreciate their approach, which is very positive and has never before been seen in MHI.

The details of the report shows the current situations, goals, and numerical values to a large extent based on their vision and mission; however, qualitative expressions are seen more often in social reports than environmental reports.

This report is very rigorous as a whole. What attracted me most were comments by the staff in charge. For example, the group leader of the Machinery department says, “Variances from overseas were almost at our target.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart.

Greetings by President Tsukuda strongly support the idea using the expression, “message from the president.” In his greetings, he says, “We will manage the company with full commitment to our Corporate Social Responsibility (CSR).” He clearly shows his vision and mission and explains the expression “manage the company with full commitment,” which was not mentioned in the previous Environmental Report. Following his line, “We will fulfill our Corporate Social Responsibility (CSR) through company businesses for the well-being of the people of the world.” This report shows the relation with the stakeholders on the two facing pages featuring the external issue of creating a sustainable society. I appreciate their approach, which is very positive and has never before been seen in MHI.

The details of the report shows the current situations, goals, and numerical values to a large extent based on their vision and mission; however, qualitative expressions are seen more often in social reports than environmental reports.

This report is very rigorous as a whole. What attracted me most were comments by the staff in charge. For example, the group leader of the Machinery department says, “Variances from overseas were almost at our target.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her greetings, “It will be my great pleasure if a museum visitor becomes the president of the world.” This really warmed my heart. The Director of the Mitsubishi Minatomai...
Progress Toward a Sustainable Society

MHI’s Activities (Society Environment)

<table>
<thead>
<tr>
<th>Year</th>
<th>Major Events, At Home and Abroad (Society Environment)</th>
<th>Japan</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>Institutes “Basic Law for Environmental Pollution Control”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>Completes Japan’s first PWIR power plant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Institutes “basic Law for Environmental Management”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>Establishes “Environmental Agency”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>In-House Conference on CFC Measures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Initiates In-House Conference on CFC Measures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Initiates In-House Conference on CO2 Measures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Completions of all PWIRs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Establishes “Corporate Environmental Action Guide”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments of Third Party

The Okuma School of Public Management Waseda University

Prof. Masayasu Kitagawa

Toshikiko Goto

MHI will commemorate the 10th anniversary of its founding this year. The company has established an “Environmental Report” focusing on existing environmental conservation and created a “Social and Environmental Report” corresponding to Social Corporate Responsibility (CSR).

Greetings by President Tokuda strongly support the idea using the expression “message from the president.” In his greetings, he says, “We will manage the company with full commitment to our Corporate Social Responsibility (CSR).” He clearly shows his vision and mission applying the expression “manage the company with full commitment,” which was not mentioned in the previous Environmental Report. Following the ties, saying, “We will fulfill our Corporate Social Responsibility (CSR) through company businesses for the well-being of the people of the world,” this report shows the relationship with the stakeholders on the two facing pages featuring the external issue of creating a sustainable society. I appreciate their approach, which is very positive and has never before been seen in MHI.

The details of the report show the current situations, goals, and numerical values to a large extent based on their vision and mission; however, qualitative expressions are seen more often in social reports than environmental reports.

I feel this report is very rigorous as a whole. What attracted me most were comments by the staff in charge. For example, the group leader of the Machinery Department says, “It is meaningful to ask ourselves what we have been able to do and what is left to do.” This really warmed my heart. The Director of the Mitsubishi Minatomirai Industrial Museum said in her report, “I believe that the report is quite rigorous,” and “The report is generally rigorous.” What attracted me were comments by the staff in charge. For example, the group leader of the Machinery Department says, “It is meaningful to ask ourselves what we have been able to do and what is left to do.” The report is generally rigorous.” I expect more detailed information about developing power generation on the ocean and fishing banks combining ocean-development technology and wind power generation together with the government, municipality and citizens. It is critically important for Japan and other states to improve its self-sustainability rate of energy, although I understand that it is impossible to rely only on renewable energy sources.

The report mainly covers only Mitsubishi Heavy Industries Ltd., but I think a parent company group, I hope the company will prepare a consolidated report of the Mitsubishi Heavy Industries Group as soon as possible. Regarding the external section, the link between the conduct guideline and risk- and long-term objectives is somewhat unclear. I also expect more detailed information about the balance of nonlinear factors in the future.

In relation to the social and economic section, I would like to offer some suggestions. The company’s CSR activities based on the customer creed are excellent, and therefore I expect you to quantify customer satisfaction. Finally, I suggest you need more information on how to make the most of your valuable advice for our future activities.

After receiving valuable comments

On the publication of MHI Social and Environmental Report (CSR report) 2004, we asked Prof. Kitagawa and Mr. Goto to comment. They gave us their valuable opinions, for example, "the report is generally rigorous" and "efforts should be made to quantify qualitative expressions in social and economic sections." We drastically reviewed the previous environmental report, and in publishing a new Social and Environmental Report, we included many articles discussing a variety of topics. We already regret this. We would like to reflect these areas pointed out by the commenters in the future reports to create an easier report that makes one feel human activities and warmth. Along with the whole vision and mission described in the report, the whole company will enhance more substantial corporate activities to realize a bright future of the people of the world.
### Comparative Table with GRI Guideline 2002

In preparing this report, we referred to GRI Guideline 2002. The following table shows the details described in GRI Guideline 2002 and the listed pages in this report.

<table>
<thead>
<tr>
<th>GRI Guideline</th>
<th>Relevance page in this report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision and Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>Statement of the organization’s vision and strategy regarding its contribution to sustainable development</td>
<td>1, 3, 4, 7-16</td>
</tr>
<tr>
<td>Statement from the CEO (or equivalent senior manager) describing key elements of the report</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td></td>
</tr>
<tr>
<td>Organizational Profile</td>
<td></td>
</tr>
<tr>
<td>Name of reporting organization</td>
<td>1</td>
</tr>
<tr>
<td>Major products and/or services, including brands if appropriate</td>
<td>9-16, 25</td>
</tr>
<tr>
<td>Operational structure of the organization</td>
<td>25-26</td>
</tr>
<tr>
<td>Description of major divisions, operating companies, subsidiaries, and joint ventures</td>
<td>25-26</td>
</tr>
<tr>
<td>Countries in which the organization’s operations are located</td>
<td>1, 25-26</td>
</tr>
<tr>
<td>Nature of ownership, legal form</td>
<td>1</td>
</tr>
<tr>
<td>Scale of the reporting organization</td>
<td>1, 25-26</td>
</tr>
<tr>
<td>List of stakeholders, key attributes of each, and relationship to the reporting organization</td>
<td>5-6</td>
</tr>
<tr>
<td><strong>Report Scope</strong></td>
<td></td>
</tr>
<tr>
<td>Contact person(s) for the report, including e-mail and web addresses</td>
<td>17-39, Back cover</td>
</tr>
<tr>
<td>Reporting period (e.g., fiscal/calendar year) for information provided</td>
<td>2</td>
</tr>
<tr>
<td>Date of most recent previous report (if any)</td>
<td>2</td>
</tr>
<tr>
<td>Suitable report (including regions, products/services, divisions/businesses) and any specific industries in the scope</td>
<td>2, 25-26</td>
</tr>
<tr>
<td><strong>Report Profile</strong></td>
<td></td>
</tr>
<tr>
<td>Criteria/definitions used in any accounting for economic, environmental, and social costs and benefits</td>
<td>33 (Environmental Accounting balance)</td>
</tr>
<tr>
<td>Means by which report users can obtain additional information and reports about economic, environmental, and social aspects of the organization’s activities, including facility-specific information (if available)</td>
<td>Back cover</td>
</tr>
<tr>
<td><strong>Governance Structure and Management Systems</strong></td>
<td></td>
</tr>
<tr>
<td>Governance structure of the organization, including major committees under the board of directors that are responsible for setting strategy and for oversight of the organization</td>
<td>27-28</td>
</tr>
<tr>
<td>Organizational structure and key individuals responsible for oversight, implementation, and audit of economic, environmental, social, and related policies</td>
<td>27-28</td>
</tr>
<tr>
<td>Mission and values statements, internally developed codes of conduct or principles, and policies relevant to economic, environmental, and social performance and the status of implementation</td>
<td>1, 3-4, 7-16, 27-28 (Sustainable Society)</td>
</tr>
<tr>
<td><strong>Stakeholder Engagement</strong></td>
<td></td>
</tr>
<tr>
<td>Basis for identification and selection of major stakeholders</td>
<td>5-6</td>
</tr>
<tr>
<td><strong>Overarching Policies and Management Systems</strong></td>
<td></td>
</tr>
<tr>
<td>Explanation of whether and how the precautionary approach or principle is addressed by the organization</td>
<td>27-28, 38</td>
</tr>
<tr>
<td>Principal memberships in industry and business associations, and/or national/international advocacy organizations</td>
<td>47</td>
</tr>
<tr>
<td>Policies and/or systems for managing upstream and downstream impact</td>
<td>39, 41-42</td>
</tr>
<tr>
<td>Programs and procedures pertaining to economic, environmental, and social performance</td>
<td>27-28, 29-30</td>
</tr>
<tr>
<td>Status of certification pertaining to economic, environmental, and social management systems</td>
<td>29-30</td>
</tr>
</tbody>
</table>

### 4. GRI Content Index

#### 4.1 A table identifying location of each element of the GRI Report Content, by section and indicator | 51-52 |

#### 5. Performance Indicators

- **Economic Performance Indicators**
  - EC1, EC2: Net sales, Geographic breakdown of markets | 25-26 |
  - EC6: Interest and dividend | 47 |

- **Environmental Performance Indicators**
  - EN1: Direct energy use segmented by primary source | 34 |
  - EN17: Initiatives to use renewable energy sources and to increase energy efficiency | 17-24, 21-22, 33, 35, 39 |

- **Other Indicators**
  - EN5: Total water use | 34, 36 |
  - EN12: Significant discharges to water by type | 36 |
  - EN13: Significant environmental impact of principal products and services | 17-24, 33-34 |

#### Human Rights

- HR1: Description of policies, guidelines, corporate structure, and procedures to deal with all aspects of human rights relevant to operations, including monitoring mechanisms and results | 27-28, 44 |

- **Society**
  - SO1: Control of effects on local communities | 36, 45-46 |
  - SO2: Bribery and corruption (policy) | 28 |
  - SO3: Political donation (policy)/Product Responsibility | 28 |

- **Product Responsibility**
  - PR1: Health and safety of customers (policy) | 28 |
  - PR2: Products and services (policy) | 48 |
  - PR3: Protection of customers’ privacy | 48 |
In preparing this report, we referred to GRI Guideline 2002. The following table shows the details described in GRI Guideline 2002 and the listed pages in this report.

<table>
<thead>
<tr>
<th>GRI Guideline</th>
<th>Relevant page in this report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision and Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>(III) Statement of the organization’s vision and strategy regarding its contribution to sustainable development</td>
<td>1, 3, 4, 7-16</td>
</tr>
<tr>
<td>(IV) Statement from the CEO (or equivalent senior manager) describing key elements of the report</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Profile</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Name of reporting organization.</td>
<td>1</td>
</tr>
<tr>
<td>(II) Major products and/or services, including brands if appropriate.</td>
<td>9-16, 25</td>
</tr>
<tr>
<td>(III) Operational structure of the organization.</td>
<td>25-26</td>
</tr>
<tr>
<td>(IV) Description of major divisions, operating companies, subsidiaries, and joint ventures.</td>
<td>25-26</td>
</tr>
<tr>
<td>(V) Countries in which the organization’s operations are located.</td>
<td>1, 25-26</td>
</tr>
<tr>
<td>(VI) Nature of ownership, legal form.</td>
<td>1</td>
</tr>
<tr>
<td>(VII) Scale of the reporting organization.</td>
<td>1, 25-26</td>
</tr>
<tr>
<td><strong>Report Scope</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Contact person(s) for the report, including e-mail and web addresses.</td>
<td>17, 39, Back cover</td>
</tr>
<tr>
<td>(II) Reporting period (e.g., fiscal/calendar year) for information provided.</td>
<td>2</td>
</tr>
<tr>
<td>(III) Date of most recent previous report (if any).</td>
<td>2</td>
</tr>
<tr>
<td>(IV) Basis for report (country/region product/service, division/segment) and any specific limitations on the scope</td>
<td>2, 25-26</td>
</tr>
<tr>
<td><strong>Governance Structure and Management Systems</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Governance structure of the organization, including major committees under the board of directors that are responsible for setting strategy and for oversight of the organization.</td>
<td>27-28</td>
</tr>
<tr>
<td>(II) Organizational structure and key individuals responsible for oversight, implementation, and audit of economic, environmental, social, and related policies.</td>
<td>27-28</td>
</tr>
<tr>
<td>(III) Mission and values statements, internally developed codes of conduct or principles, and policies relevant to economic, environmental, and social performance and the status of implementation.</td>
<td>1, 3-4, 7-16, 21-23 (Section 1.4.1: Mission and values)</td>
</tr>
<tr>
<td><strong>Stakeholder Engagement</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Basis for identification and selection of major stakeholders.</td>
<td>5-6</td>
</tr>
<tr>
<td><strong>Overarching Policies and Management Systems</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Explanation of whether and how the precautionary approach or principle is addressed by the organization.</td>
<td>27-28, 38</td>
</tr>
<tr>
<td>(II) Principal memberships in industry and business associations, and/or national/international advocacy organizations.</td>
<td>47</td>
</tr>
<tr>
<td>(III) Policies and/or systems for managing upstream and downstream impact.</td>
<td>39, 41-42</td>
</tr>
<tr>
<td>(IV) Programs and procedures pertaining to economic, environmental, and social performance.</td>
<td>27-28, 29-30</td>
</tr>
<tr>
<td>(V) Status of certification pertaining to economic, environmental, and social management systems.</td>
<td>29-30</td>
</tr>
</tbody>
</table>
MHI, as experts in manufacturing products, provide various technologies and products that support the social infrastructure. We consider each of them to be essential in making people’s lives fulfilling. We also believe that succession of technology and fostering the next generation who will create the future world are important social contributions, and thus we have opened the Mitsubishi Minatomirai Industrial Museum to cultivate children’s interest in manufacturing.

The photographs are of children attending a handicraft class where pupils are thinking seriously on their own and enjoying manufacturing handmade. Looking at these photographs, we strongly feel that some of these children will become excellent engineers and scientists creating an affluent future.

MHI will make continuous efforts to provide technologies and products for creating a sustainable society, and to foster the next generation as well as to engage in environment conservation activities to hand over a verdant earth to the next generation with pride and responsibility.

If you have any inquiries about this report, please contact the following division:

Mitsubishi Heavy Industries, Ltd.
General Affairs Department
16-5 Konan 2 chome, Minato-ku, Tokyo, Japan
Postal Code: 108-8215
Phone: 81-3-6716-3111
Fax: 81-3-6716-3800
Home Page Address: http://www.mhi.co.jp/